



# Revised Vegetation Classification for Mount Rainier, North Cascades, and Olympic National Parks

*Synoptic Cover/Constancy Tables for Plant Associations and Wetland Alliances*



*Abies lasiocarpa - Tsuga mertensiana / Festuca viridula* Woodland (with *Pinus albicaulis* present) near Crystal Lake at Mount Rainier National Park.

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## Section A. Synoptic tables for plant associations of Mount Rainier, North Cascades, and Olympic National Parks

These tables include floristic cover data for all upland associations and all wetland associations that were included in section A of The Revised Vegetation Classification for Mount Rainier, North Cascades and Olympic National Parks- *Descriptions and Identification Keys for Plant Associations and Wetland Alliances* (Ramm-Granberg et al. 2021). In each table, species are shown that have  $\geq$  40% constancy in at least one of the associations being compared.

- Size Class Categories: Overstory = tree  $\geq$  5m; Understory = trees and seedlings  $<$  5m; Unknown = tree stratum was not recorded in plots from some data sets;
- Dominance: mean cover values  $\geq$  10% mean cover are in **bold**
- Constancy: orange highlight = constancy 40-59%; blue highlight = constancy 60-79%; green highlight = constancy 80-100%

For all tables in Section A, Specific Growth Form codes are: BT = Broad-leaved Tree, CT = Conifer Tree, F = Forb, Fe = Fern, Fe ally = Fern Ally, G = Grass, Gr = Graminoid, L = Lichen, LT = Liverwort, M = Moss, S = Shrub, and SS = Subshrub.

## 1.B.2.Nb Rocky Mountain Forest & Woodland

### ***M020 Rocky Mountain Subalpine-High Montane Forest***

G218 Rocky Mountain Subalpine Moist Spruce - Fir Forest & Woodland

G219 Rocky Mountain Subalpine Dry-Mesic Spruce - Fir Forest & Woodland

**Table A-1.** Synoptic table for G218 Rocky Mountain Subalpine Moist Spruce - Fir Forest & Woodland and G219 Rocky Mountain Subalpine Dry-Mesic Spruce - Fir Forest & Woodland.

Group		G218					G219
Alliance		A3614 Abies lasiocarpa - Picea engelmannii Rocky Mountain Moist Forest					A3643 Abies lasiocarpa - Picea engelmannii Rocky Mountain Dry-Mesic Forest
Abbrev (Plot Count)		ABILAS-(CALNOO)/VACSCO/VALSIT (8)	ABILAS-(PICENG)/RHOALB (11)	ABILAS/RHOALB/RUBLAS (23)	ABILAS/VACMEM (32)	ABILAS/VACMEM/LUPARC (22)	ABILAS-PICENG/VACSCO (5)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Abies lasiocarpa ssp. lasiocarpa (overstory)	CT	100, 30	100, 20	96, 32	100, 16	91, 25	100, 10
Picea engelmannii (overstory)	CT	50, 6	100, 19	–	41, 4	14, 7	100, 16
Tsuga mertensiana (overstory)	CT	38, 1	45, 2	39, 5	3, 3	27, 3	–
Abies amabilis (overstory)	CT	38, 1	36, 3	52, 8	25, 2	14, 10	–
Pseudotsuga menziesii (overstory)	CT	–	18, 4	26, 5	100, 14	9, 2	–
Pinus monticola (overstory)	CT	–	9, 1	4, 1	44, 1	–	–
Abies lasiocarpa ssp. lasiocarpa (understory)	CT	100, 10	82, 6	87, 12	94, 8	82, 11	100, 7
Abies amabilis (understory)	CT	62, 2	55, 3	61, 5	47, 2	23, 1	–
Pinus albicaulis (understory)	CT	62, 3	9, 0.1	–	16, 2	27, 1	100, 1

Abbrev (Plot Count)		ABILAS- (CALNOO)/ VACSCO/ VALSIT (8)	ABILAS- (PICENG)/ RHOALB (11)	ABILAS/ RHOALB/ RUBLAS (23)	ABILAS/ VACMEM (32)	ABILAS/ VACMEM/ LUPARC (22)	ABILAS- PICENG/ VACSCO (5)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Callitropsis nootkatensis</i> (understory)	CT	62, 2	–	26, 5	12, 2	18, 4	–
<i>Picea engelmannii</i> (understory)	CT	12, 3	73, 3	–	28, 1	5, 0.1	60, 6
<i>Tsuga mertensiana</i> (understory)	CT	25, 2	45, 3	39, 3	12, 1	18, 1	–
<i>Pseudotsuga menziesii</i> (understory)	CT	–	9, 0.1	4, 0.1	75, 2	5, 0.1	–
<i>Pinus monticola</i> (understory)	CT	–	–	13, 1	50, 3	5, 0.1	–
<i>Vaccinium membranaceum</i>	S	75, 7	100, 18	91, 15	100, 23	100, 27	100, 12
<i>Sorbus sitchensis</i>	S	50, 1	27, 1	39, 3	12, 1	55, 6	–
<i>Rhododendron albiflorum</i>	S	25, 2	100, 23	100, 24	25, 1	14, 2	40, 1
<i>Paxistima myrsinites</i>	S	38, 7	27, 3	22, 5	100, 12	68, 11	80, 3
<i>Sorbus scopulina</i>	S	–	9, 3	4, 1	69, 3	18, 4	20, 0.1
<i>Amelanchier alnifolia</i>	S	–	–	–	53, 2	5, 25	–
<i>Salix scouleriana</i>	S	–	9, 1	9, 2	53, 2	14, 0.1	–
<i>Vaccinium scoparium</i>	SS	100, 25	45, 9	13, 2	3, 0.1	18, 5	100, 44
<i>Vaccinium deliciosum</i>	SS	50, 8	36, 13	17, 2	6, 2	14, 2	40, 7
<i>Phyllodoce empetriformis</i>	SS	25, 1	45, 3	9, 2	–	14, 3	20, 4
<i>Chimaphila umbellata</i> ssp. <i>umbellata</i>	SS	–	9, 0.1	4, 3	59, 1	9, 2	–
<i>Arnica latifolia</i>	F	88, 3	100, 4	17, 2	–	41, 3	80, 6
<i>Valeriana sitchensis</i>	F	88, 8	73, 7	65, 6	6, 6	45, 6	40, 4
<i>Lupinus latifolius</i>	F	75, 8	64, 3	35, 4	47, 2	86, 8	100, 4
<i>Polemonium pulcherrimum</i>	F	62, 2	55, 1	–	12, 1	45, 1	80, 1
<i>Rubus lasiococcus</i>	F	62, 9	36, 12	83, 6	44, 4	68, 5	–
<i>Pedicularis racemosa</i>	F	50, 4	55, 1	9, 1	69, 1	45, 1	100, 2
<i>Veratrum viride</i>	F	50, 1	55, 2	17, 2	–	18, 1	40, 1
<i>Hieracium albiflorum</i>	F	50, 1	9, 0.1	26, 1	62, 1	32, 2	–

Abbrev (Plot Count)		ABILAS- (CALNOO)/ VACSCO/ VALSIT (8)	ABILAS- (PICENG)/ RHOALB (11)	ABILAS/ RHOALB/ RUBLAS (23)	ABILAS/ VACMEM (32)	ABILAS/ VACMEM/ LUPARC (22)	ABILAS- PICENG/ VACSCO (5)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Ligusticum grayi	F	50, 2	18, 2	9, 0.1	3, 0.1	14, 0.1	100, 0.1
Viola orbiculata	F	50, 2	27, 1	17, 1	–	23, 1	–
Orthilia secunda	F	25, 4	55, 1	43, 2	53, 1	18, 1	20, 0.1
Pedicularis bracteosa	F	12, 3	55, 1	–	28, 2	23, 0.1	100, 1
Erythronium montanum	F	12, 1	–	43, 11	–	14, 4	–
Goodyera oblongifolia	F	12, 1	27, 0.1	9, 1	66, 0.1	5, 0.1	20, 0.1
Chamaenerion angustifolium	F	25, 1	9, 0.1	4, 5	44, 0.1	41, 1	20, 0.1
Arnica cordifolia	F	–	9, 0.1	–	47, 1	5, 0.1	80, 2
Lomatium brandegeei	F	–	–	4, 1	41, 1	27, 1	40, 1
Moehringia macrophylla	F	12, 1	9, 1	26, 1	44, 1	23, 1	–
Eucephalus engelmannii	F	12, 0.1	9, 0.1	–	44, 2	23, 2	–
Phlox diffusa	F	12, 1	–	4, 2	12, 1	45, 2	40, 1
Erigeron glacialis var. glacialis	F	12, 1	27, 2	–	–	18, 1	100, 2
Hieracium triste	F	12, 1	9, 0.1	–	3, 0.1	5, 1	60, 0.1
Festuca viridula	G	50, 4	–	–	6, 1	36, 4	60, 3
Calamagrostis rubescens	G	–	–	–	72, 7	5, 3	20, 4
Luzula hitchcockii	Gr	88, 9	64, 5	17, 2	–	36, 2	100, 1
Undifferentiated Moss	M	–	27, 11	48, 6	50, 6	41, 4	20, 3

G220 Rocky Mountain Lodgepole Pine Forest & Woodland

**Table A-2.** Synoptic table for G220 Rocky Mountain Lodgepole Pine Forest & Woodland.

Alliance		A3366 Pinus contorta Rocky Mountain Forest Alliance	
Abbrev (Plot Count)		PINCON/CALRUB (4)	PINCON/VACMEM (7)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover
Pinus contorta (overstory)	CT	100, 24	100, 18
Pseudotsuga menziesii (overstory)	CT	100, 7	57, 9
Abies lasiocarpa ssp. lasiocarpa (overstory)	CT	–	43, 2
Pseudotsuga menziesii (understory)	CT	100, 2	86, 4
Abies lasiocarpa ssp. lasiocarpa (understory)	CT	–	86, 5
Pinus contorta (understory)	CT	25, 1	43, 3
Paxistima myrsinites	S	100, 9	100, 7
Salix scouleriana	S	75, 1	100, 2
Spiraea lucida	S	75, 6	43, 3
Holodiscus discolor	S	75, 0.1	–
Vaccinium membranaceum	S	50, 2	100, 32
Amelanchier alnifolia	S	50, 0.1	71, 6
Ceanothus velutinus	S	50, 0.1	14, 1
Rosa gymnocarpa	S	50, 0.1	–
Rubus nutkanus	S	50, 1	14, 0.1
Shepherdia canadensis	S	50, 1	–
Alnus viridis ssp. sinuata	S	–	43, 3
Sorbus scopulina	S	–	57, 3
Arctostaphylos uva-ursi	SS	100, 2	–
Chimaphila umbellata ssp. umbellata	SS	50, 1	43, 1
Mahonia nervosa	SS	50, 2	14, 0.1
Arctostaphylos nevadensis ssp. nevadensis	SS	–	57, 21

Abbrev (Plot Count)		PINCON/CALRUB (4)	PINCON/VACMEM (7)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover
Hieracium albiflorum	F	50, 1	57, 1
Achillea millefolium	F	50, 0.1	–
Lysimachia latifolia	F	50, 0.1	–
Pedicularis racemosa	F	–	43, 0.1
Rubus lasiococcus	F	–	57, 3
Calamagrostis rubescens	G	100, 7	86, 8
Racomitrium canescens	M	50, 12	14, 1
Undifferentiated M	M	50, 10	14, 20

G223 Northern Rocky Mountain Whitebark Pine - Subalpine Larch Woodland

**Table A-3.** Synoptic table for G223 Northern Rocky Mountain Whitebark Pine - Subalpine Larch Woodland.

Alliance		A0631 Larix lyallii Woodland			A3368 Pinus albicaulis Forest & Woodland		
Abbrev (Plot Count)		LARLYA/ VACDEL- CASMER (42)	LARLYA/ VACSCO/ LUZGLA (12)	ABILAS- PINALB/ JUNCOM (15)	PINALB- ABILAS/ VACSCO/ LUZGLA (8)	PINALB/ CALRUB (2)	PINALB/ FESVIR (9)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Abies lasiocarpa ssp. lasiocarpa (overstory)	CT	90, 7	92, 12	80, 4	100, 7	50, 7	100, 6
Larix lyallii (overstory)	CT	98, 10	100, 18	27, 0.1	50, 5	–	33, 0.1
Tsuga mertensiana (overstory)	CT	69, 5	–	27, 1	–	–	–
Pinus albicaulis(overstory)	CT	36, 1	83, 2	80, 6	100, 12	100, 8	100, 8



Abbrev (Plot Count)		LARLYA/ VACDEL- CASMER (42)	LARLYA/ VACSCO/ LUZGLA (12)	ABILAS- PINALB/ JUNCOM (15)	PINALB- ABILAS/ VACSCO/ LUZGLA (8)	PINALB/ CALRUB (2)	PINALB/ FESVIR (9)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Picea engelmannii</i> (overstory)	CT	21, 2	67, 8	27, 1	25, 1	–	33, 4
<i>Abies lasiocarpa</i> ssp. <i>lasiocarpa</i> (understory)	CT	100, 8	<b>100, 11</b>	<b>100, 13</b>	100, 8	<b>100, 10</b>	100, 6
<i>Larix lyallii</i> (understory)	CT	98, 9	100, 6	27, 1	25, 1	–	22, 1
<i>Tsuga mertensiana</i> (understory)	CT	83, 5	–	40, 3	–	50, 0.1	11, 0.1
<i>Pinus albicaulis</i> (understory)	CT	74, 1	92, 1	<b>100, 10</b>	100, 7	100, 7	100, 9
<i>Picea engelmannii</i> (understory)	CT	17, 0.1	42, 1	13, 0.1	25, 2	–	22, 1
<i>Vaccinium membranaceum</i>	S	50, 3	<b>42, 10</b>	67, 5	75, 6	–	78, 8
<i>Paxistima myrsinites</i>	S	5, 0.1	–	93, 5	88, 6	<b>100, 22</b>	78, 8
<i>Phyllodoce empetriformis</i>	SS	<b>98, 23</b>	67, 3	20, 1	38, 2	–	11, 1
<i>Cassiope mertensiana</i>	SS	<b>86, 16</b>	42, 6	–	–	–	–
<i>Vaccinium delicosum</i>	SS	<b>95, 19</b>	33, 2	27, 3	25, 2	–	<b>22, 16</b>
<i>Vaccinium scoparium</i>	SS	17, 9	<b>92, 28</b>	7, 1	<b>100, 20</b>	100, 6	11, 1
<i>Vaccinium cespitosum</i>	SS	2, 2	50, 9	7, 3	12, 5	50, 3	22, 1
<i>Juniperus communis</i>	SS	7, 1	17, 1	<b>87, 2</b>	38, 3	–	22, 0.1
<i>Vaccinium myrtillus</i>	SS	–	–	–	–	50, 0.1	–
<i>Luetkea pectinata</i>	F	88, 4	17, 8	7, 1	<b>12, 18</b>	–	11, 5
<i>Antennaria lanata</i>	F	50, 3	58, 7	–	62, 1	–	22, 1
<i>Lupinus latifolius</i>	F	38, 1	83, 2	33, 1	88, 3	100, 2	100, 2
<i>Eremogone capillaris</i> var. <i>americana</i>	F	33, 1	75, 3	100, 2	100, 4	100, 2	100, 5

Abbrev (Plot Count)		LARLYA/ VACDEL- CASMER (42)	LARLYA/ VACSCO/ LUZGLA (12)	ABILAS- PINALB/ JUNCOM (15)	PINALB- ABILAS/ VACSCO/ LUZGLA (8)	PINALB/ CALRUB (2)	PINALB/ FESVIR (9)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Phlox diffusa	F	26, 0.1	75, 2	80, 2	62, 3	50, 0.1	67, 5
Erigeron glacialis var. glacialis	F	31, 1	67, 2	7, 0.1	88, 1	50, 3	56, 1
Hieracium triste	F	29, 0.1	75, 1	7, 0.1	50, 1	50, 1	44, 0.1
Veronica cusickii	F	26, 1	67, 4	–	25, 1	–	22, 2
Castilleja miniata	F	–	42, 0.1	53, 0.1	75, 1	100, 0.1	44, 0.1
Senecio integerrimus	F	10, 1	50, 2	33, 0.1	88, 1	50, 1	78, 2
Pedicularis bracteosa	F	10, 1	50, 1	7, 0.1	25, 2	–	22, 0.1
Sedum lanceolatum	F	–	25, 0.1	67, 0.1	50, 0.1	100, 0.1	67, 0.1
Lomatium brandegeei	F	10, 0.1	33, 1	67, 0.1	50, 2	50, 0.1	67, 2
Penstemon davidsonii	F	7, 1	8, 0.1	73, 2	–	50, 0.1	–
Lewisia columbiana	F	10, 1	8, 3	60, 1	–	–	33, 0.1
Penstemon procerus	F	2, 0.1	33, 0.1	33, 0.1	75, 2	50, 0.1	22, 2
Agoseris glauca	F	–	8, 0.1	–	38, 0.1	100, 0.1	22, 2
Arnica parryi	F	–	17, 1	–	–	100, 1	22, 1
Packera streptanthifolia	F	–	–	13, 0.1	25, 1	100, 0.1	33, 1
Achillea millefolium	F	–	–	13, 1	38, 1	50, 0.1	78, 1
Arnica cordifolia	F	–	17, 1	33, 0.1	25, 1	50, 1	–
Eucephalus engelmannii	F	–	–	7, 1	–	50, 0.1	11, 2
Veratrum viride	F	12, 0.1	17, 2	–	–	50, 0.1	11, 0.1
Eriogonum pyrolifolium	F	–	–	27, 0.1	25, 2	–	44, 1
Hieracium scouleri	F	–	–	20, 1	25, 2	–	44, 1
Festuca viridula	G	33, 3	67, 4	60, 4	88, 5	100, 2	100, 10
Calamagrostis rubescens	G	–	–	7, 1	12, 0.1	50, 6	–
Luzula hitchcockii	Gr	86, 2	100, 12	33, 0.1	62, 1	50, 0.1	44, 1

Abbrev (Plot Count)		LARLYA/ VACDEL- CASMER (42)	LARLYA/ VACSCO/ LUZGLA (12)	ABILAS- PINALB/ JUNCOM (15)	PINALB- ABILAS/ VACSCO/ LUZGLA (8)	PINALB/ CALRUB (2)	PINALB/ FESVIR (9)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Juncus parryi	Gr	50, 2	50, 2	73, 1	62, 2	–	78, 4

**M500 Central Rocky Mountain Mesic Lower Montane Forest**

G211 Central Rocky Mountain Mesic Grand Fir - Douglas-fir Forest

G212 East Cascades Mesic Grand Fir - Douglas-fir Forest

**Table A-4.** Synoptic table for G211 Central Rocky Mountain Mesic Grand Fir - Douglas-fir Forest and G212 East Cascades Mesic Grand Fir - Douglas-fir Forest.

Group		G211		G212						
Alliance		A3362 Pseudotsuga menziesii / Vaccinium membranaceum Forest	A3582 Tsuga heterophylla - Abies grandis Cascadian Mesic Cove Forest	A3583 Abies grandis - Pseudotsuga menziesii Mesic Cascadian Forest						
Abbrev (Plot Count)		PSEMEN/ VACMEM (22)	TSUHET- (PSEMEN)/ TIATRI- GYMDRY (28)	ABILAS- PSEMEN/ ACECIR (13)	ACEMAC/ ACECIR- PAXMYR- (CORCOR) (23)	ACEMAC/ RUBPAR/ MAIRAC (9)	ACEMAC/ SYMALB (12)	PSEMEN- (ABIGRA)/ ACECIR- PAXMYR (13)	PSEMEN- (PINPON)/ SYMALB (6)	PSEMEN- (TSUHET)/ ACECIR- PAXMYR (13)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Pseudotsuga menziesii (overstory)	CT	100, 33	89, 24	54, 6	48, 3	67, 7	92, 18	100, 27	100, 36	100, 18
Abies lasiocarpa ssp. lasiocarpa (overstory)	CT	50, 4	4, 1	100, 14	9, 5	–	8, 0.1	23, 1	–	8, 0.1

Abbrev (Plot Count)		PSEMEN/ VACMEM (22)	TSUHET- (PSEMEN)/ TIATRI- GYMDRY (28)	ABILAS- PSEMEN/ ACECIR (13)	ACEMAC/ ACECIR- PAXMYR- (CORCOR) (23)	ACEMAC/ RUBPAR/ MAIRAC (9)	ACEMAC/ SYMALB (12)	PSEMEN- (ABIGRA)/ ACECIR- PAXMYR (13)	PSEMEN- (PINPON)/ SYMALB (6)	PSEMEN- (TSUHET)/ ACECIR- PAXMYR (13)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Pinus monticola</i> (overstory)	CT	55, 2	–	–	–	33, 3	–	15, 2	–	38, 3
<i>Tsuga heterophylla</i> (overstory)	CT	14, 2	<b>96, 29</b>	38, 2	4, 0.1	–	–	–	–	<b>69, 16</b>
<i>Thuja plicata</i> (overstory)	CT	9, 0.1	<b>71, 17</b>	8, 0.1	17, 3	56, 2	17, 1	38, 3	17, 1	<b>100, 17</b>
<i>Pinus ponderosa</i> (overstory)	CT	5, 6	–	–	–	–	33, 6	8, 2	67, 4	–
<i>Abies lasiocarpa</i> ssp. <i>lasiocarpa</i> (understory)	CT	64, 1	–	<b>85, 11</b>	9, 5	11, 0.1	–	15, 1	–	8, 0.1
<i>Pseudotsuga</i> <i>menziesii</i> (understory)	CT	64, 2	14, 1	46, 2	30, 0.1	44, 1	58, 3	54, 1	<b>83, 3</b>	23, 2
<i>Pinus monticola</i> (understory)	CT	59, 1	4, 0.1	–	–	33, 0.1	–	–	–	38, 1
<i>Tsuga heterophylla</i> (understory)	CT	27, 1	<b>96, 15</b>	31, 1	–	–	–	–	–	<b>85, 7</b>
<i>Thuja plicata</i> understory)	CT	18, 1	57, 3	–	22, 1	22, 1	17, 0.1	23, 4	17, 3	<b>92, 6</b>
<i>Abies grandis</i> (understory)	CT	14, 3	18, 2	23, 6	22, 4	–	25, 4	<b>31, 11</b>	33, 1	54, 4
<i>Taxus brevifolia</i> (understory)	CT	32, 1	32, 4	15, 3	13, 4	33, 0.1	–	–	–	46, 2
<i>Acer macrophyllum</i> (overstory)	BT	5, 1	–	–	<b>43, 20</b>	<b>89, 34</b>	<b>92, 29</b>	77, 7	<b>100, 10</b>	23, 3
<i>Acer macrophyllum</i> (understory)	BT	–	7, 0.1	8, 5	<b>65, 24</b>	<b>100, 15</b>	<b>92, 14</b>	62, 3	100, 4	31, 1
<i>Cornus nuttallii</i> (underoverstory)	BT	–	–	–	–	22, 1	<b>75, 33</b>	31, 5	50, 6	<b>15, 10</b>

Abbrev (Plot Count)		PSEMEN/ VACMEM (22)	TSUHET- (PSEMEN)/ TIATRI- GYMDRY (28)	ABILAS- PSEMEN/ ACECIR (13)	ACEMAC/ ACECIR- PAXMYR- (CORCOR) (23)	ACEMAC/ RUBPAR/ MAIRAC (9)	ACEMAC/ SYMALB (12)	PSEMEN- (ABIGRA)/ ACECIR- PAXMYR (13)	PSEMEN- (PINPON)/ SYMALB (6)	PSEMEN- (TSUHET)/ ACECIR- PAXMYR (13)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Paxistima myrsinites</i>	S	<b>95, 11</b>	14, 1	85, 5	<b>87, 11</b>	78, 8	67, 3	85, 6	83, 0.1	<b>100, 13</b>
<i>Vaccinium membranaceum</i>	S	<b>100, 22</b>	14, 1	46, 0.1	9, 1	33, 2	–	31, 4	–	69, 4
<i>Sorbus scopulina</i>	S	82, 3	14, 1	38, 5	43, 3	33, 6	17, 1	38, 2	–	31, 1
<i>Amelanchier alnifolia</i>	S	64, 3	4, 1	31, 0.1	48, 2	56, 3	58, 2	46, 1	83, 4	69, 1
<i>Salix scouleriana</i>	S	64, 2	–	8, 0.1	30, 5	56, 8	17, 2	–	–	23, 1
<i>Spiraea lucida</i>	S	64, 3	–	8, 0.1	4, 0.1	33, 1	33, 1	54, 2	83, 4	77, 1
<i>Acer glabrum</i> var. <i>douglasii</i>	S	50, 7	–	31, 5	<b>70, 10</b>	<b>78, 13</b>	<b>17, 14</b>	54, 4	33, 6	46, 4
<i>Vaccinium parvifolium</i>	S	5, 6	86, 5	31, 1	–	–	–	–	–	31, 2
<i>Oplopanax horridus</i>	S	–	71, 3	–	9, 1	11, 1	–	–	–	23, 1
<i>Vaccinium ovalifolium</i>	S	–	43, 2	15, 0.1	–	–	–	–	–	8, 0.1
<i>Acer circinatum</i>	S	5, 2	39, 7	<b>92, 11</b>	<b>100, 49</b>	<b>22, 22</b>	<b>8, 70</b>	<b>92, 34</b>	17, 5	<b>92, 30</b>
<i>Rubus leucodermis</i>	S	–	–	77, 0.1	17, 0.1	11, 0.1	25, 0.1	–	50, 1	8, 0.1
<i>Ribes lacustre</i>	S	–	25, 1	46, 0.1	22, 1	–	–	8, 0.1	–	15, 0.1
<i>Rubus nutkanus</i>	S	<b>27, 11</b>	11, 1	8, 1	39, 3	78, 7	75, 9	69, 0.1	17, 0.1	62, 1
<i>Rosa gymnocarpa</i>	S	32, 2	32, 1	8, 0.1	17, 1	56, 2	67, 3	69, 0.1	50, 0.1	100, 1
<i>Symphoricarpos albus</i>	S	–	–	8, 0.1	26, 2	44, 1	<b>75, 26</b>	31, 0.1	<b>83, 32</b>	–
<i>Mahonia aquifolium</i>	S	9, 1	–	–	–	33, 0.1	42, 2	31, 0.1	100, 3	15, 1
<i>Philadelphus lewisii</i>	S	–	–	–	–	11, 6	42, 4	–	50, 6	–
<i>Sambucus cerulea</i>	S	–	–	–	–	<b>11, 21</b>	42, 0.1	–	17, 1	–
<i>Holodiscus discolor</i>	S	–	–	15, 6	22, 2	22, 2	25, 4	15, 1	100, 1	8, 3
<i>Corylus cornuta</i>	S	–	–	8, 2	<b>61, 10</b>	–	–	–	–	31, 7
<i>Chimaphila umbellata</i> ssp. <i>umbellata</i>	SS	86, 2	14, 1	8, 0.1	–	33, 0.1	33, 2	62, 0.1	17, 0.1	77, 2
<i>Linnaea borealis</i>	SS	<b>45, 16</b>	<b>64, 16</b>	–	–	–	–	8, 0.1	–	54, 6
<i>Chimaphila menziesii</i>	SS	5, 0.1	21, 1	15, 0.1	–	–	–	46, 0.1	17, 0.1	31, 0.1

Abbrev (Plot Count)		PSEMEN/ VACMEM (22)	TSUHET- (PSEMEN)/ TIATRI- GYMDRY (28)	ABILAS- PSEMEN/ ACECIR (13)	ACEMAC/ ACECIR- PAXMYR- (CORCOR) (23)	ACEMAC/ RUBPAR/ MAIRAC (9)	ACEMAC/ SYMALB (12)	PSEMEN- (ABIGRA)/ ACECIR- PAXMYR (13)	PSEMEN- (PINPON)/ SYMALB (6)	PSEMEN- (TSUHET)/ ACECIR- PAXMYR (13)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Mahonia nervosa</i>	SS	27, 1	36, 2	8, 1	9, 3	11, 1	8, 0.1	38, 1	17, 0.1	69, 3
<i>Polystichum munitum</i>	Fe	9, 0.1	82, 7	–	22, 1	–	–	8, 0.1	–	31, 0.1
<i>Gymnocarpium dryopteris</i>	Fe	5, 0.1	75, 7	–	–	–	–	–	–	–
<i>Athyrium filix-femina</i>	Fe	–	57, 2	–	9, 2	11, 1	8, 0.1	–	–	8, 0.1
<i>Cryptogramma acrostichoides</i>	Fe	5, 0.1	–	46, 0.1	43, 1	–	–	–	17, 0.1	–
<i>Pteridium aquilinum</i>	Fe	32, 3	11, 3	8, 5	26, 3	67, 5	92, 9	62, 1	33, 1	54, 1
<i>Goodyera oblongifolia</i>	F	82, 0.1	32, 1	38, 0.1	4, 0.1	11, 0.1	8, 0.1	85, 0.1	33, 0.1	92, 1
<i>Hieracium albiflorum</i>	F	68, 1	4, 0.1	–	13, 0.1	11, 0.1	17, 1	31, 0.1	50, 1	31, 1
<i>Orthilia secunda</i>	F	64, 1	21, 1	8, 0.1	4, 0.1	11, 0.1	8, 1	15, 0.1	–	77, 1
<i>Maianthemum racemosum</i> ssp. <i>amplexicaule</i>	F	50, 2	11, 0.1	–	74, 0.1	89, 5	50, 1	62, 1	17, 0.1	69, 1
<i>Moehringia macrophylla</i>	F	41, 1	–	–	–	–	17, 2	38, 0.1	50, 2	–
<i>Pedicularis racemosa</i>	F	50, 0.1	–	–	–	–	–	–	–	–
<i>Rubus lasiococcus</i>	F	55, 3	4, 1	–	–	–	–	–	–	–
<i>Tiarella trifoliata</i>	F	9, 1	93, 11	–	4, 0.1	–	–	–	–	23, 0.1
<i>Clintonia uniflora</i>	F	32, 1	68, 3	–	4, 0.1	67, 3	17, 8	54, 2	–	92, 4
<i>Achlys triphylla</i>	F	–	61, 8	–	4, 3	–	–	–	–	–
<i>Trillium ovatum</i>	F	5, 0.1	46, 1	–	9, 1	56, 0.1	42, 0.1	46, 0.1	–	38, 0.1
<i>Maianthemum stellatum</i>	F	14, 0.1	43, 4	–	26, 1	56, 3	8, 1	54, 1	–	46, 1
<i>Cornus unalaschkensis</i>	F	–	50, 8	–	–	–	–	–	–	15, 2
<i>Prosartes hookeri</i>	F	27, 1	29, 1	–	22, 2	78, 4	83, 1	85, 1	50, 0.1	54, 3
<i>Adenocaulon bicolor</i>	F	27, 4	25, 2	–	–	44, 1	75, 2	31, 5	33, 1	38, 0.1

Abbrev (Plot Count)		PSEMEN/ VACMEM (22)	TSUHET- (PSEMEN)/ TIATRI- GYMDRY (28)	ABILAS- PSEMEN/ ACECIR (13)	ACEMAC/ ACECIR- PAXMYR- (CORCOR) (23)	ACEMAC/ RUBPAR/ MAIRAC (9)	ACEMAC/ SYMALB (12)	PSEMEN- (ABIGRA)/ ACECIR- PAXMYR (13)	PSEMEN- (PINPON)/ SYMALB (6)	PSEMEN- (TSUHET)/ ACECIR- PAXMYR (13)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Galium triflorum	F	9, 0.1	18, 0.1	15, 0.1	35, 0.1	44, 0.1	50, 1	31, 4	50, 0.1	23, 0.1
Thalictrum occidentale	F	18, 2	–	8, 0.1	4, 2	44, 5	–	23, 2	–	–
Osmorhiza berteroi	F	18, 1	11, 1	–	–	11, 0.1	50, 3	23, 0.1	17, 0.1	–
Osmorhiza spp.	F	5, 0.1	4, 0.1	–	–	11, 2	42, 3	–	17, 2	–
Calamagrostis rubescens	G	68, 4	–	–	–	22, 1	33, 3	23, 0.1	50, 2	–
Elymus glaucus	G	9, 3	–	8, 0.1	4, 0.1	–	67, 5	8, 0.1	83, 6	–
Undifferentiated M	M	41, 9	68, 32	85, 21	26, 12	–	17, 1	8, 5	50, 7	31, 16

**M501 Central Rocky Mountain Dry Lower Montane-Foothill Forest**

G210 Central Rocky Mountain Douglas-fir - Pine Forest

**Table A-5.** Synoptic table for G210 Central Rocky Mountain Douglas-fir - Pine Forest.

<b>Alliance</b>		A3392 Pseudotsuga menziesii - Pinus ponderosa / Shrub Understory Central Rocky Mountain Forest & Woodland			A3395 Pseudotsuga menziesii - Pinus ponderosa / Herbaceous Understory Central Rocky Mountain Woodland	A3396 Pseudotsuga menziesii - Pinus contorta var. latifolia Central Rocky Mountain Forest
<b>Abbrev (Plot Count)</b>		PSEMEN-PINPON/ARCNEV-PAXMYR (18)	PSEMEN/HOLDIS/CALRUB (25)	PSEMEN/PAXMYR-SPIBET (17)	PSEMEN/CALRUB (28)	PSEMEN-PINCON/ARCNEV (12)
<b>Species (Strata)</b>	<b>Specific Growth Form</b>	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Pseudotsuga menziesii (overstory)	CT	100, 16	100, 41	100, 28	100, 26	100, 12
Pinus ponderosa (overstory)	CT	100, 9	24, 8	47, 5	86, 9	25, 2
Pinus contorta (overstory)	CT	28, 3	12, 8	18, 3	–	92, 7
Abies lasiocarpa ssp. lasiocarpa (overstory)	CT	–	–	18, 4	4, 0.1	50, 3
Pseudotsuga menziesii (understory)	CT	100, 2	96, 6	76, 4	86, 2	92, 4
Pinus ponderosa (understory)	CT	83, 1	4, 4	24, 1	64, 1	17, 0.1
Abies lasiocarpa ssp. lasiocarpa (understory)	CT	–	–	6, 0.1	–	67, 3
Pinus contorta (understory)	CT	6, 0.1	8, 2	12, 0.1	–	67, 2
Pinus monticola (understory)	CT	–	–	6, 0.1	–	42, 1
Prunus emarginata (understory)	BT	17, 1	32, 2	65, 2	–	–
Paxistima myrsinites	S	89, 8	96, 2	100, 15	82, 4	100, 7



Abbrev (Plot Count)		PSEMEN- PINPON/ARCNEV- PAXMYR (18)	PSEMEN/HOLDIS/ CALRUB (25)	PSEMEN/PAXMYR- SPIBET (17)	PSEMEN/CALRUB (28)	PSEMEN- PINCON/ARCNEV (12)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Spiraea lucida</i>	S	72, 4	88, 4	100, 8	57, 3	42, 4
<i>Amelanchier alnifolia</i>	S	78, 1	88, 3	71, 4	57, 1	75, 1
<i>Ceanothus velutinus</i>	S	78, 2	16, 1	76, 2	75, 3	33, 4
<i>Holodiscus discolor</i>	S	44, 1	<b>96, 10</b>	18, 1	21, 1	17, 1
<i>Salix scouleriana</i>	S	44, 1	32, 0.1	53, 3	39, 5	75, 1
<i>Rosa gymnocarpa</i>	S	11, 0.1	96, 5	41, 1	11, 0.1	8, 1
<i>Mahonia aquifolium</i>	S	22, 0.1	76, 4	24, 1	21, 0.1	–
<i>Acer glabrum</i> var. <i>douglasii</i>	S	11, 1	56, 5	59, 3	7, 2	–
<i>Acer circinatum</i>	S	–	48, 6	18, 2	–	–
<i>Sorbus scopulina</i>	S	11, 0.1	4, 1	65, 3	7, 0.1	67, 0.1
<i>Vaccinium membranaceum</i>	S	11, 0.1	24, 4	24, 1	4, 3	83, 5
<i>Arctostaphylos nevadensis</i> ssp. <i>nevadensis</i>	SS	<b>89, 24</b>	4, 3	47, 1	61, 4	<b>92, 29</b>
<i>Lonicera ciliosa</i>	SS	11, 1	84, 2	6, 1	4, 0.1	–
<i>Mahonia nervosa</i>	SS	–	<b>68, 10</b>	6, 0.1	4, 0.1	8, 0.1
<i>Chimaphila umbellata</i> ssp. <i>umbellata</i>	SS	–	56, 1	29, 1	–	42, 0.1
<i>Cryptogramma</i> <i>acrostichoides</i>	Fe	44, 0.1	24, 0.1	29, 0.1	7, 0.1	25, 0.1
<i>Hieracium scouleri</i>	F	89, 1	16, 1	65, 0.1	57, 1	75, 0.1
<i>Goodyera oblongifolia</i>	F	11, 1	80, 0.1	53, 0.1	4, 0.1	25, 0.1
<i>Hieracium albiflorum</i>	F	17, 0.1	76, 1	47, 0.1	25, 0.1	50, 0.1
<i>Fragaria virginiana</i>	F	11, 0.1	68, 2	24, 0.1	4, 1	8, 0.1
<i>Lysimachia latifolia</i>	F	6, 0.1	72, 2	–	–	–
<i>Arnica cordifolia</i>	F	17, 1	56, 1	65, 1	29, 0.1	8, 0.1
<i>Moehringia macrophylla</i>	F	28, 0.1	48, 0.1	65, 1	21, 1	25, 0.1
<i>Chamaenerion angustifolium</i>	F	22, 0.1	8, 0.1	47, 1	68, 3	8, 1

Abbrev (Plot Count)		PSEMEN- PINPON/ARCNEV- PAXMYR (18)	PSEMEN/HOLDIS/ CALRUB (25)	PSEMEN/PAXMYR- SPIBET (17)	PSEMEN/CALRUB (28)	PSEMEN- PINCON/ARCNEV (12)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Erythronium grandiflorum</i>	F	6, 0.1	–	41, 0.1	–	8, 0.1
<i>Eucephalus engelmannii</i>	F	11, 0.1	–	47, 1	–	8, 0.1
<i>Maianthemum racemosum</i> ssp. <i>amplexicaule</i>	F	–	12, 0.1	59, 3	–	8, 0.1
<i>Platanthera unalascensis</i>	F	11, 0.1	24, 0.1	53, 0.1	11, 0.1	17, 0.1
<i>Achillea millefolium</i>	F	39, 1	28, 0.1	24, 0.1	46, 0.1	8, 0.1
<i>Lupinus latifolius</i>	F	11, 1	16, 1	35, 0.1	14, 1	42, 0.1
<i>Calamagrostis rubescens</i>	G	<b>83, 16</b>	<b>92, 10</b>	<b>88, 10</b>	<b>100, 23</b>	<b>92, 8</b>
<i>Pseudoroegneria spicata</i>	G	50, 5	–	12, 4	54, 7	–
<i>Festuca occidentalis</i>	G	11, 0.1	56, 1	12, 0.1	18, 1	17, 3
Undifferentiated Moss	M	<b>67, 13</b>	<b>56, 19</b>	53, 5	46, 7	<b>75, 17</b>

## 1.B.2.Nd Vancouverian Forest & Woodland

### M024 Vancouverian Lowland & Montane Forest

G205 Vancouverian Dry Coastal Beach Pine Forest & Woodland

G237 North Pacific Red Alder - Bigleaf Maple - Douglas-fir Forest

**Table A-6.** Synoptic table for G205 Vancouverian Dry Coastal Beach Pine Forest & Woodland and G237 North Pacific Red Alder - Bigleaf Maple - Douglas-fir Forest.

Group		G205	G237	
Alliance		A3717 Pinus contorta var. contorta Sand Dune Woodland	A0427 Alnus rubra - Acer macrophyllum - Pseudotsuga menziesii Forest	A3385 Alnus rubra - Acer macrophyllum Forest
Abbrev (Plot Count)		PINCON-PSEMEN/GAUSHA (43)	ACEMAC-PSEMEN/ACECIR/POLMUN (29)	ALNRUB/POLMUN (19)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Pinus contorta (overstory)	CT	<b>60, 25</b>	–	–
Pseudotsuga menziesii (overstory)	CT	<b>58, 12</b>	<b>69, 40</b>	11, 4
Thuja plicata (overstory)	CT	5, 3	69, 8	–
Tsuga heterophylla (overstory)	CT	19, 5	62, 7	16, 4
Picea sitchensis (overstory)	CT	–	–	47, 9
Pseudotsuga menziesii (understory)	CT	53, 6	59, 1	5, 3
Tsuga heterophylla (understory)	CT	33, 2	45, 5	21, 7
Picea sitchensis (understory)	CT	–	–	42, 3
Acer macrophyllum (overstory)	BT	–	<b>97, 38</b>	5, 5
Alnus rubra (overstory)	BT	–	48, 6	<b>74, 52</b>
Alnus rubra (understory)	BT	–	10, 2	<b>42, 10</b>
Gaultheria shallon	S	<b>100, 59</b>	17, 1	47, 9
Vaccinium parvifolium	S	44, 2	55, 3	32, 5
Rosa gymnocarpa	S	42, 2	34, 1	5, 0.1

Abbrev (Plot Count)		PINCON-PSEMEN/GAUSHA (43)	ACEMAC- PSEMEN/ACECIR/POLMUN (29)	ALNRUB/POLMUN (19)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Acer circinatum	S	16, 1	<b>86, 17</b>	5, 3
Corylus cornuta	S	2, 3	<b>55, 21</b>	5, 3
Rubus spectabilis	S	–	21, 1	<b>84, 25</b>
Sambucus racemosa	S	–	10, 0.1	42, 8
Mahonia nervosa	SS	44, 3	55, 3	16, 4
Rubus ursinus	SS	33, 1	79, 2	21, 8
Pteridium aquilinum	Fe	51, 6	45, 1	26, 6
Polystichum munitum	Fe	2, 0.1	<b>100, 30</b>	<b>100, 32</b>
Equisetum arvense	Fe ally	–	–	47, 3
Lysimachia latifolia	F	16, 0.1	62, 1	11, 0.1
Adenocaulon bicolor	F	–	55, 4	–
Circaea alpina	F	–	52, 3	21, 6
Galium triflorum	F	–	45, 2	26, 2
Mycelis muralis	F	2, 0.1	48, 1	16, 1
Viola glabella	F	–	48, 1	–
Claytonia sibirica	F	–	38, 1	<b>47, 10</b>
Heracleum maximum	F	–	–	<b>47, 12</b>
Bromus vulgaris	G	–	41, 1	21, 2
Rhytidiadelphus triquetrus	M	5, 1	<b>48, 11</b>	–

G240 North Pacific Maritime Douglas-fir - Western Hemlock Forest

**Table A-7.** Synoptic table for A3377 *Tsuga heterophylla* - *Pseudotsuga menziesii* / *Rubus spectabilis* Mesic Forest Alliance.

Abbrev (Plot Count)		PSEMEN-TSUHET- (ALNRUB)/RUBSPE (7)	PSEMEN-TSUHET/ (ACECIR)/POLMUN (23)	PSEMEN-TSUHET/ GAUSHA/POLMUN (48)	PSEMEN-TSUHET/ MAHNER-POLMUN (72)	PSEMEN-TSUHET/ POLMUN-OXAORE (9)	TSUHET/ POLMUN-BLESPI (14)	TSUHET-(PSEMEN)/ VACALA/POLMUN (15)	TSUHET-(PSEMEN-THUPLI)/ POLMUN-ATHFIL (84)	TSUHET-PSEMEN/ VACALA/OXAORE (9)	TSUHET/GAUSHA/ POLMUN-BLESPI (10)	TSUHET/ POLMUN-OXAORE (11)	TSUHET/ VACALA/OXAORE (11)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Tsuga heterophylla</i> (overstory)	CT	100, 27	100, 26	33, 21	35, 31	67, 34	100, 41	100, 34	25, 25	100, 22	100, 43	100, 32	100, 43
<i>Abies amabilis</i> (overstory)	CT	57, 6	4, 0.1	4, 1	6, 3	–	36, 2	33, 4	10, 5	–	–	9, 3	9, 13
<i>Pseudotsuga menziesii</i> (overstory)	CT	14, 15	100, 22	31, 22	32, 33	100, 20	57, 12	80, 19	21, 12	100, 18	–	27, 8	18, 4
<i>Thuja plicata</i> (overstory)	CT	29, 3	65, 8	31, 10	32, 18	100, 29	43, 13	67, 8	23, 15	44, 6	30, 10	45, 10	–
<i>Picea sitchensis</i> (overstory)	CT	14, 2	–	–	–	33, 4	21, 3	13, 6	–	78, 5	60, 3	27, 8	64, 4
<i>Tsuga heterophylla</i> (understory)	CT	86, 3	96, 11	29, 15	35, 23	78, 10	100, 16	100, 17	25, 11	100, 6	90, 15	100, 13	82, 29
<i>Abies amabilis</i> (understory)	CT	43, 2	13, 0.1	–	8, 4	–	57, 2	33, 1	6, 3	–	–	–	–
<i>Thuja plicata</i> (understory)	CT	29, 2	52, 2	31, 11	17, 9	11, 10	7, 1	13, 2	12, 4	–	20, 5	9, 2	–

Abbrev (Plot Count)		PSEMEN-TSUHET- (ALNRUB)/RUBSPE (7)	PSEMEN-TSUHET/ (ACECIR)/POLMUN (23)	PSEMEN-TSUHET/ GAUSHA/POLMUN (48)	PSEMEN-TSUHET/ MAHNER-POLMUN (72)	PSEMEN-TSUHET/ POLMUN-OXAORE (9)	TSUHET/ POLMUN-BLESPI (14)	TSUHET-(PSEMEN)/ VACALA/POLMUN (15)	TSUHET-(PSEMEN-THUPLI)/ POLMUN-ATHFIL (84)	TSUHET-PSEMEN/ VACALA/OXAORE (9)	TSUHET/GAUSHA/ POLMUN-BLESPI (10)	TSUHET/ POLMUN-OXAORE (11)	TSUHET/ VACALA/OXAORE (11)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Picea sitchensis</i> (understory)	CT	-	-	-	-	11, 2	7, 2	20, 1	1, 0.1	89, 4	10, 0.1	27, 2	18, 1
<i>Pseudotsuga menziesii</i> (unknown)	CT	-	-	67, 60	65, 47	-	-	-	70, 45	-	-	-	-
<i>Thuja plicata</i> (unknown)	CT	-	-	56, 25	54, 34	-	-	-	61, 33	-	-	-	-
<i>Tsuga heterophylla</i> (unknown)	CT	-	-	58, 24	57, 37	-	-	-	71, 36	-	-	-	-
<i>Alnus rubra</i> (overstory)	BT	57, 13	17, 3	-	3, 3	11, 0.1	-	13, 2	8, 2	22, 2	40, 5	9, 1	-
<i>Acer macrophyllum</i> (overstory)	BT	29, 4	48, 3	19, 3	6, 7	22, 2	-	27, 1	12, 5	-	-	-	9, 2
<i>Alnus rubra</i> (understory)	BT	43, 5	-	-	1, 7	11, 0.1	-	7, 1	5, 8	-	20, 8	-	9, 3
<i>Acer macrophyllum</i> (unknown)	BT	-	-	33, 16	38, 19	-	-	-	55, 18	-	-	-	-
<i>Vaccinium parvifolium</i>	S	86, 3	74, 3	92, 4	81, 3	56, 2	93, 2	80, 7	79, 3	89, 9	100, 6	55, 16	82, 16
<i>Rubus spectabilis</i>	S	86, 30	22, 0.1	6, 0.1	12, 1	56, 3	43, 1	73, 4	54, 5	44, 9	90, 28	100, 18	91, 6

Abbrev (Plot Count)		PSEMEN-TSUHET- (ALNRUB)/RUBSPE (7)	PSEMEN-TSUHET/ (ACECIR)/POLMUN (23)	PSEMEN-TSUHET/ GAUSHA/POLMUN (48)	PSEMEN-TSUHET/ MAHNER-POLMUN (72)	PSEMEN-TSUHET/ POLMUN-OXAORE (9)	TSUHET/ POLMUN-BLESPI (14)	TSUHET-(PSEMEN)/ VACALA/POLMUN (15)	TSUHET-(PSEMEN-THUPLI)/ POLMUN-ATHFIL (84)	TSUHET-PSEMEN/ VACALA/OXAORE (9)	TSUHET/GAUSHA/ POLMUN-BLESPI (10)	TSUHET/ POLMUN-OXAORE (11)	TSUHET/ VACALA/OXAORE (11)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Rosa gymnocarpa	S	43, 5	17, 1	50, 1	31, 1	11, 1	-	13, 5	23, 1	11, 0.1	-	-	-
Vaccinium ovalifolium	S	<b>43, 15</b>	35, 2	2, 0.1	11, 2	22, 2	86, 2	<b>100, 16</b>	13, 3	<b>100, 17</b>	50, 7	82, 8	<b>91, 24</b>
Acer circinatum	S	14, 5	83, 8	<b>27, 13</b>	<b>50, 15</b>	<b>89, 24</b>	14, 2	<b>67, 11</b>	<b>52, 15</b>	56, 8	-	9, 3	27, 1
Gaultheria shallon	S	29, 2	52, 1	<b>100, 31</b>	62, 3	-	43, 1	33, 1	38, 2	11, 0.1	<b>100, 25</b>	55, 3	55, 6
Holodiscus discolor	S	-	4, 3	52, 4	10, 2	-	-	-	19, 3	-	-	-	-
Rhododendron menziesii	S	14, 3	22, 1	8, 1	4, 1	22, 1	29, 1	27, 4	5, 3	44, 6	70, 7	45, 7	36, 8
Frangula purshiana ssp. purshiana	S	-	22, 0.1	25, 0.1	18, 1	-	-	7, 2	29, 1	-	<b>10, 10</b>	45, 2	45, 2
Mahonia nervosa	SS	-	52, 1	88, 9	<b>100, 17</b>	<b>33, 14</b>	36, 1	7, 5	60, 3	-	-	-	-
Rubus ursinus	SS	14, 1	48, 1	73, 4	57, 1	-	-	20, 3	57, 3	-	-	-	-
Linnaea borealis	SS	-	52, 4	67, 5	40, 5	-	29, 1	33, 3	14, 2	11, 2	-	-	-
Polystichum munitum	Fe	100, 5	<b>100, 21</b>	<b>100, 14</b>	<b>100, 19</b>	<b>100, 14</b>	86, 7	<b>93, 11</b>	<b>99, 47</b>	<b>67, 11</b>	<b>80, 16</b>	<b>100, 22</b>	<b>91, 11</b>
Athyrium filix-femina	Fe	57, 7	39, 2	8, 1	17, 1	56, 2	36, 0.1	53, 4	62, 5	11, 5	60, 3	64, 4	27, 4

Abbrev (Plot Count)		PSEMEN-TSUHET- (ALNRUB)/RUBSPE (7)	PSEMEN-TSUHET/ (ACECIR)/POLMUN (23)	PSEMEN-TSUHET/ GAUSHA/POLMUN (48)	PSEMEN-TSUHET/ MAHNER-POLMUN (72)	PSEMEN-TSUHET/ POLMUN-OXAORE (9)	TSUHET/ POLMUN-BLESPI (14)	TSUHET-(PSEMEN)/ VACALA/POLMUN (15)	TSUHET-(PSEMEN-THUPLI)/ POLMUN-ATHFIL (84)	TSUHET-(PSEMEN)/ VACALA/OXAORE (9)	TSUHET/GAUSHA/ POLMUN-BLESPI (10)	TSUHET/ POLMUN-OXAORE (11)	TSUHET/ VACALA/OXAORE (11)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Gymnocarpium dryopteris	Fe	57, 3	13, 1	2, 2	11, 6	<b>56, 29</b>	29, 4	27, 7	20, 7	33, 4	20, 1	–	9, 0.1
Struthiopteris spicant	Fe	57, 7	39, 1	6, 0.1	14, 2	–	100, 9	60, 5	29, 2	33, 7	<b>100, 10</b>	82, 7	100, 7
Pteridium aquilinum	Fe	14, 3	26, 5	58, 3	32, 1	<b>11, 15</b>	–	13, 6	30, 3	33, 8	–	9, 5	<b>18, 22</b>
Dryopteris expansa	Fe	29, 1	35, 0.1	10, 1	32, 1	–	14, 3	27, 3	71, 3	<b>11, 10</b>	10, 1	18, 3	27, 1
Tiarella trifoliata	F	71, 2	43, 3	21, 2	39, 2	56, 3	50, 2	87, 6	65, 7	100, 7	10, 1	73, 5	73, 2
Achlys triphylla	F	43, 9	35, 1	25, 1	44, 3	<b>89, 19</b>	29, 1	73, 6	25, 4	33, 8	–	18, 3	9, 5
Rubus pedatus	F	43, 5	–	2, 5	3, 0.1	11, 5	43, 2	47, 5	4, 2	44, 5	–	–	<b>45, 10</b>
Cornus unalaschkensis	F	43, 6	13, 4	8, 3	6, 3	11, 2	14, 2	60, 6	1, 1	44, 8	–	–	27, 4
Maianthemum dilatatum	F	<b>43, 11</b>	4, 0.1	2, 5	4, 1	–	14, 0.1	40, 2	7, 1	67, 5	<b>60, 14</b>	64, 9	73, 6
Tolmiea menziesii	F	43, 4	–	–	–	11, 2	–	–	6, 5	–	–	–	–
Lysimachia latifolia	F	–	57, 1	62, 1	49, 2	11, 1	7, 0.1	20, 2	48, 1	11, 5	–	–	–
Trillium ovatum	F	14, 0.1	43, 0.1	42, 1	51, 1	11, 1	36, 0.1	7, 0.1	48, 1	–	–	18, 1	–
Galium triflorum	F	29, 1	4, 1	50, 2	43, 1	22, 2	7, 1	–	61, 2	–	–	–	–
Oxalis oregana	F	<b>29, 25</b>	–	–	–	<b>100, 33</b>	14, 0.1	20, 8	2, 3	<b>100, 14</b>	<b>60, 14</b>	<b>100, 15</b>	<b>91, 12</b>



Abbrev (Plot Count)		PSEMEN-TSUHET- (ALNRUB)/RUBSPE (7)	PSEMEN-TSUHET/ (ACECIR)/POLMUN (23)	PSEMEN-TSUHET/ GAUSHA/POLMUN (48)	PSEMEN-TSUHET/ MAHNER-POLMUN (72)	PSEMEN-TSUHET/ POLMUN-OXAORE (9)	TSUHET/ POLMUN-BLESPI (14)	TSUHET-(PSEMEN)/ VACALA/POLMUN (15)	TSUHET-(PSEMEN-THUPLI)/ POLMUN-ATHFIL (84)	TSUHET-PSEMEN/ VACALA/OXAORE (9)	TSUHET/GAUSHA/ POLMUN-BLESPI (10)	TSUHET/ POLMUN-OXAORE (11)	TSUHET/ VACALA/OXAORE (11)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Adenocaulon bicolor	F	29, 1	13, 1	15, 0.1	15, 1	67, 1	–	13, 2	17, 1	–	–	9, 2	–
Goodyera oblongifolia	F	–	26, 0.1	19, 0.1	32, 1	44, 1	36, 0.1	7, 1	6, 1	–	–	–	–
Clintonia uniflora	F	14, 13	9, 1	6, 2	12, 1	–	36, 2	40, 3	8, 2	11, 2	–	–	18, 9
Prosartes hookeri	F	–	13, 0.1	10, 0.1	18, 1	22, 1	–	–	12, 0.1	–	–	45, 1	–
Asarum caudatum	F	–	4, 2	6, 1	6, 1	–	14, 1	–	10, 0.1	–	–	–	–
Conocephalum conicum	LT	43, 2	–	–	–	–	–	–	–	–	–	–	–
Hylacomium splendens	M	43, 39	26, 43	4, 46	6, 28	33, 6	14, 3	7, 20	5, 14	–	10, 3	–	18, 16
Undifferentiated Moss	M	29, 16	87, 46	69, 36	61, 27	22, 20	64, 37	80, 37	63, 18	78, 19	50, 23	45, 22	9, 20

**Table A-8.** Synoptic table for A3378 *Tsuga heterophylla* - *Pseudotsuga menziesii* / *Cornus unalaschensis* Mesic Forest.

Abbrev (Plot Count)		ABILAS-PSEMEN/ MAHNER (8)	PSEMEN-(THUPLI-ABI(GRA)/ VACMEM (21)	PSEMEN/ACECIR/ MAHNER (35)	PSEMEN/MAHNER/ACHTRI (13)	PSEMEN-TSUHET/ ACHTRI (39)	PSEMEN-TSUHET/ GAUSHA-MAHNER (51)	PSEMEN-TSUHET/ MAHNER (78)	PSEMEN-TSUHET/ RHOMAC (19)	PSEMEN-TSUHET/ VACALAXERTEN (7)	TSUHET-(PSEMEN)/VACALA- MAHNER-(GAUSHA) (21)	TSUHET-(PSEMEN)/VACALA/ CORUNA (30)	TSUHET-PSEMEN/MAHNER- CHIMEN (75)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Pseudotsuga menziesii</i> (overstory)	CT	100, 34	100, 37	100, 50	100, 58	100, 36	65, 33	79, 26	26, 23	43, 9	95, 19	80, 17	92, 25
<i>Abies lasiocarpa</i> ssp. <i>lasiocarpa</i> (overstory)	CT	100, 19	24, 2	–	8, 3	3, 1	–	–	–	–	–	–	–
<i>Tsuga heterophylla</i> (overstory)	CT	50, 12	76, 9	20, 2	46, 8	90, 20	63, 25	78, 26	26, 35	43, 18	100, 41	93, 38	92, 38
<i>Thuja plicata</i> (overstory)	CT	–	52, 3	37, 5	–	36, 10	37, 9	74, 13	16, 5	29, 8	86, 9	63, 9	67, 9
<i>Abies amabilis</i> (overstory)	CT	12, 15	43, 2	–	15, 1	21, 1	10, 3	9, 2	5, 0.1	43, 4	24, 1	47, 3	24, 2
<i>Pseudotsuga menziesii</i> (understory)	CT	88, 5	81, 3	71, 3	62, 6	18, 5	18, 4	32, 2	5, 10	14, 6	19, 6	13, 6	16, 3
<i>Abies lasiocarpa</i> ssp. <i>lasiocarpa</i> (understory)	CT	100, 6	24, 1	–	–	3, 3	2, 1	–	–	14, 0.1	–	–	–
<i>Tsuga heterophylla</i> (understory)	CT	50, 8	90, 4	46, 2	92, 3	92, 10	65, 11	79, 10	26, 7	43, 8	95, 13	90, 13	84, 11
<i>Abies amabilis</i> (understory)	CT	38, 2	62, 1	6, 0.1	23, 1	31, 3	14, 1	18, 1	5, 0.1	29, 4	38, 4	80, 6	27, 1
<i>Thuja plicata</i> (understory)	CT	–	57, 2	49, 2	–	21, 3	39, 5	73, 8	5, 0.1	29, 3	48, 7	47, 3	56, 5
<i>Pinus monticola</i> (understory)	CT	38, 2	57, 1	9, 1	31, 1	5, 2	8, 1	9, 1	5, 1	43, 2	5, 1	7, 1	5, 0.1

Abbrev (Plot Count)		ABILAS-PSEMEN/ MAHNER (8)	PSEMEN-(THUPLI-ABIGRAY)/ VACMEM (21)	PSEMEN/ACECIR/ MAHNER (35)	PSEMEN/MAHNER/ACHTRI (13)	PSEMEN-TSUHET/ ACHTRI (39)	PSEMEN-TSUHET/ GAUSHA-MAHNER (51)	PSEMEN-TSUHET/ MAHNER (78)	PSEMEN-TSUHET/ RHOMAC (19)	PSEMEN-TSUHET/ VACALAXERTEN (7)	TSUHET-(PSEMEN)/VACALA- MAHNER-(GAUSHA) (21)	TSUHET-(PSEMEN)/VACALA/ CORUNA (30)	TSUHET-PSEMEN/MAHNER- CHIMEN (75)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Taxus brevifolia (understory)	CT	–	10, 2	20, 1	<b>15, 16</b>	18, 1	27, 2	41, 3	–	–	19, 1	23, 3	21, 3
Pseudotsuga menziesii (unknown)	CT	–	–	–	–	–	<b>33, 59</b>	<b>21, 63</b>	<b>74, 70</b>	<b>57, 18</b>	–	–	<b>8, 38</b>
Thuja plicata (unknown)	CT	–	–	–	–	–	<b>24, 15</b>	<b>9, 28</b>	<b>68, 46</b>	14, 0.1	–	<b>7, 10</b>	5, 4
Tsuga heterophylla (unknown)	CT	–	–	–	–	–	<b>29, 37</b>	<b>21, 42</b>	<b>53, 24</b>	<b>57, 40</b>	–	<b>7, 36</b>	<b>8, 32</b>
Abies amabilis (unknown)	CT	–	–	–	–	–	4, 1	–	–	43, 1	–	7, 4	3, 0.1
Vaccinium membranaceum	S	62, 3	<b>100, 17</b>	43, 1	38, 1	23, 4	10, 4	50, 1	5, 5	71, 2	19, 2	20, 2	31, 0.1
Rosa gymnocarpa	S	62, 9	33, 0.1	94, 2	62, 2	46, 4	45, 1	53, 1	42, 1	–	10, 1	3, 3	8, 0.1
Symphoricarpos albus	S	62, 3	–	17, 2	31, 1	13, 2	2, 0.1	3, 0.1	–	–	–	–	–
Amelanchier alnifolia	S	25, 1	81, 1	80, 1	38, 1	15, 1	8, 1	21, 0.1	11, 2	–	5, 1	3, 0.1	1, 0.1
Paxistima myrsinites	S	25, 1	76, 3	71, 5	62, 1	8, 0.1	14, 1	53, 2	–	29, 2	5, 1	13, 1	28, 1
Acer circinatum	S	–	52, 8	<b>100, 27</b>	54, 6	<b>59, 14</b>	37, 8	63, 8	11, 8	<b>29, 11</b>	52, 7	20, 2	32, 2
Spiraea lucida	S	–	57, 0.1	54, 1	–	–	10, 1	14, 1	–	–	–	–	–
Vaccinium parvifolium	S	12, 1	43, 7	29, 1	85, 2	67, 2	80, 2	73, 1	63, 2	71, 4	95, 9	100, 8	76, 1
Sorbus scopulina	S	–	43, 1	6, 0.1	–	3, 0.1	4, 1	6, 0.1	–	–	–	–	3, 1
Corylus cornuta	S	–	19, 0.1	63, 3	23, 0.1	3, 3	8, 6	8, 2	–	–	–	–	–
Holodiscus discolor	S	25, 1	14, 3	46, 3	8, 1	5, 1	22, 1	12, 2	42, 5	–	5, 0.1	–	–

Abbrev (Plot Count)		ABILAS-PSEMEN/ MAHNER (8)	PSEMEN-(THUPLI-ABIGRAY)/ VACMEM (21)	PSEMEN/ACECIR/ MAHNER (35)	PSEMEN/MAHNER/ACHTRI (13)	PSEMEN-TSUHET/ ACHTRI (39)	PSEMEN-TSUHET/ GAUSHA-MAHNER (51)	PSEMEN-TSUHET/ MAHNER (78)	PSEMEN-TSUHET/ RHOMAC (19)	PSEMEN-TSUHET/ VACALAXERTEN (7)	TSUHET-(PSEMEN)/VACALA- MAHNER-(GAUSHA) (21)	TSUHET-(PSEMEN)/VACALA/ CORUNA (30)	TSUHET-PSEMEN/MAHNER- CHIMEN (75)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Acer glabrum var. douglasii	S	25, 4	33, 2	57, 4	<b>23, 21</b>	10, 3	12, 1	22, 1	-	-	-	-	3, 1
Gaultheria shallon	S	-	19, 0.1	3, 1	23, 2	36, 2	<b>100, 38</b>	24, 1	<b>100, 23</b>	<b>57, 10</b>	<b>95, 15</b>	30, 2	19, 1
Rhododendron macrophyllum	S	-	-	-	-	-	-	1, 0.1	<b>95, 22</b>	-	-	-	-
Vaccinium ovalifolium	S	-	19, 1	-	-	23, 4	12, 2	12, 2	11, 4	57, 5	<b>100, 14</b>	<b>97, 16</b>	31, 1
Rhododendron menziesii	S	12, 6	24, 1	6, 1	-	5, 1	8, 0.1	14, 1	5, 3	43, 6	43, 4	33, 1	9, 0.1
Mahonia nervosa	SS	<b>75, 22</b>	90, 2	<b>100, 20</b>	<b>100, 26</b>	77, 8	<b>96, 14</b>	<b>97, 11</b>	84, 6	57, 7	52, 4	23, 1	68, 2
Linnaea borealis	SS	<b>62, 21</b>	90, 7	43, 2	<b>77, 10</b>	74, 7	65, 5	78, 3	32, 3	57, 3	57, 3	77, 7	43, 1
Chimaphila umbellata ssp. umbellata	SS	50, 6	95, 3	83, 3	77, 3	41, 3	51, 1	64, 1	21, 1	29, 3	29, 2	47, 2	52, 1
Arctostaphylos uva-ursi	SS	-	43, 2	3, 1	15, 1	-	6, 1	3, 5	5, 5	-	-	-	3, 1
Lonicera ciliosa	SS	12, 1	19, 1	63, 1	8, 3	3, 1	8, 0.1	13, 0.1	16, 0.1	-	-	-	1, 0.1
Chimaphila menziesii	SS	25, 1	10, 2	40, 0.1	46, 1	33, 1	31, 1	47, 0.1	16, 1	29, 0.1	24, 1	43, 0.1	71, 1
Rubus ursinus	SS	-	19, 0.1	26, 1	77, 2	23, 1	37, 1	19, 0.1	21, 1	-	14, 1	3, 0.1	4, 0.1
Gaultheria ovatifolia	SS	-	33, 3	-	46, 1	3, 0.1	2, 0.1	13, 2	5, 3	43, 4	10, 2	7, 1	12, 1
Pteridium aquilinum	Fe	12, 2	43, 2	29, 1	85, 6	26, 1	41, 2	27, 1	26, 5	14, 3	14, 1	10, 2	11, 1
Polystichum munitum	Fe	38, 1	10, 0.1	31, 1	31, 1	38, 3	47, 2	37, 1	16, 0.1	-	29, 5	47, 1	32, 1
Lupinus latifolius	F	62, 5	43, 1	-	15, 2	-	2, 0.1	1, 0.1	-	14, 1	-	-	1, 0.1
Achlys triphylla	F	<b>75, 16</b>	-	3, 3	<b>92, 10</b>	<b>100, 14</b>	31, 3	4, 0.1	-	-	19, 3	30, 2	9, 1

Abbrev (Plot Count)		ABILAS-PSEMEN/ MAHNER (8)	PSEMEN-(THUPLI-ABIGRAY)/ VACMEM (21)	PSEMEN/ACECIR/ MAHNER (35)	PSEMEN/MAHNER/ACHTRI (13)	PSEMEN-TSUHET/ ACHTRI (39)	PSEMEN-TSUHET/ GAUSHA-MAHNER (51)	PSEMEN-TSUHET/ MAHNER (78)	PSEMEN-TSUHET/ RHOMAC (19)	PSEMEN-TSUHET/ VACALAXERTEN (7)	TSUHET-(PSEMEN)/VACALA- MAHNER-(GAUSHA) (21)	TSUHET-(PSEMEN)/VACALA/ CORUNA (30)	TSUHET-PSEMEN/MAHNER- CHIMEN (75)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Orthilia secunda</i>	F	50, 2	52, 0.1	29, 1	23, 1	23, 1	2, 0.1	28, 0.1	5, 1	29, 3	29, 1	43, 1	40, 0.1
<i>Nothochelone nemorosa</i>	F	50, 1	10, 2	–	31, 1	5, 1	–	1, 4	–	–	–	–	1, 1
<i>Goodyera oblongifolia</i>	F	25, 1	81, 0.1	69, 1	38, 1	41, 1	37, 0.1	65, 0.1	21, 0.1	29, 1	33, 1	33, 0.1	49, 0.1
<i>Hieracium albiflorum</i>	F	12, 1	81, 0.1	34, 0.1	69, 1	3, 1	6, 0.1	5, 0.1	–	14, 2	–	3, 0.1	4, 0.1
<i>Pedicularis racemosa</i>	F	–	43, 1	14, 1	–	–	–	1, 0.1	–	14, 1	–	–	–
<i>Lysimachia latifolia</i>	F	12, 1	19, 2	94, 2	62, 2	36, 2	25, 0.1	46, 1	16, 0.1	–	10, 2	10, 1	7, 0.1
<i>Xerophyllum tenax</i>	F	12, 23	5, 12	–	46, 5	10, 1	14, 4	3, 2	5, 5	100, 17	10, 3	–	1, 3
<i>Cornus unalaschkensis</i>	F	–	10, 2	9, 2	8, 0.1	51, 2	10, 1	22, 2	5, 3	14, 3	57, 4	73, 5	12, 0.1
<i>Clintonia uniflora</i>	F	25, 4	14, 0.1	3, 0.1	23, 1	49, 2	8, 0.1	18, 1	11, 1	–	33, 3	67, 2	20, 1
<i>Tiarella trifoliata</i>	F	25, 11	5, 0.1	3, 0.1	8, 1	46, 3	6, 1	9, 0.1	5, 1	–	19, 2	47, 1	16, 0.1
<i>Viola sempervirens</i>	F	12, 0.1	5, 0.1	–	38, 1	56, 2	20, 1	14, 1	11, 1	–	5, 1	13, 0.1	13, 1
<i>Rubus pedatus</i>	F	25, 2	–	–	–	8, 1	–	1, 1	–	–	10, 2	47, 1	3, 0.1
Undifferentiated Moss	M	12, 5	57, 30	66, 31	31, 8	74, 32	59, 34	62, 37	42, 34	57, 12	76, 59	80, 47	84, 34
<i>Eurhynchium oreganum</i>	M	–	–	14, 4	46, 2	10, 14	6, 3	8, 11	5, 8	–	10, 19	3, 1	11, 14

**Table A-9.** Synoptic table for A3379 *Tsuga heterophylla* - *Pseudotsuga menziesii* / *Holodiscus discolor* Dry Forest.

Abbrev (Plot Count)		BETPAP-(THUPLI)/ ACECIR/ MAHNER (16)	PSEMEN-(PINCON)/ ARCUVA/ RACCAN (34)	PSEMEN/ ACECIR-(HOLDIS) (13)	PSEMEN/ GAUSHA-HOLDIS (45)	PSEMEN/ GAUSHA-MAHNER/ POLMUN (14)	PSEMEN/ GAUSHA-VACPAR (22)	PSEMEN-TSUHET/ GAUSHA-HOLDIS (19)	PSEMEN-TSUHET/ GAUSHA-VACPAR (64)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Pseudotsuga menziesii</i> (overstory)	CT	<b>94, 19</b>	<b>94, 21</b>	<b>100, 18</b>	<b>22, 34</b>	<b>100, 60</b>	<b>95, 44</b>	<b>32, 34</b>	<b>97, 24</b>
<i>Thuja plicata</i> (overstory)	CT	<b>62, 26</b>	15, 0.1	–	2, 5	7, 5	14, 2	11, 2	45, 7
<i>Tsuga heterophylla</i> (overstory)	CT	56, 7	21, 5	54, 6	9, 4	36, 3	64, 4	<b>32, 12</b>	<b>95, 25</b>
<i>Pinus contorta</i> (overstory)	CT	–	<b>82, 17</b>	–	–	–	9, 2	5, 3	–
<i>Pseudotsuga menziesii</i> (understory)	CT	50, 2	88, 5	62, 2	7, 6	14, 3	<b>59, 11</b>	<b>16, 14</b>	25, 4
<i>Tsuga heterophylla</i> (understory)	CT	44, 2	21, 2	38, 2	18, 5	50, 5	73, 4	<b>26, 15</b>	<b>94, 14</b>
<i>Thuja plicata</i> (understory)	CT	50, 2	29, 2	8, 2	4, 4	14, 3	18, 5	5, 0.1	48, 5
<i>Pinus contorta</i> (understory)	CT	–	65, 3	–	–	–	–	–	–
<i>Abies grandis</i> (understory)	CT	–	3, 1	8, 0.1	9, 5	43, 4	5, 0.1	–	3, 4
<i>Pseudotsuga menziesii</i> (unknown)	CT	–	–	–	<b>78, 73</b>	–	<b>5, 46</b>	<b>68, 65</b>	<b>3, 22</b>
<i>Tsuga heterophylla</i> (unknown)	CT	–	–	–	20, 2	–	5, 3	<b>68, 23</b>	<b>3, 40</b>
<i>Thuja plicata</i> (unknown)	CT	–	–	–	13, 3	–	5, 8	<b>58, 10</b>	3, 8
<i>Betula papyrifera</i> (overstory)	BT	<b>100, 36</b>	–	<b>8, 15</b>	–	–	<b>9, 12</b>	–	5, 0.1
<i>Acer macrophyllum</i> (overstory)	BT	62, 9	3, 3	38, 6	<b>13, 16</b>	<b>93, 17</b>	9, 2	5, 2	2, 0.1
<i>Acer macrophyllum</i> (understory)	BT	38, 1	3, 0.1	31, 2	<b>4, 12</b>	50, 2	9, 0.1	–	2, 2
<i>Acer circinatum</i>	S	<b>94, 25</b>	9, 5	<b>54, 17</b>	<b>9, 13</b>	7, 3	32, 4	11, 2	25, 2

Abbrev (Plot Count)		BETPAP-(THUPLI)/ACECIR/MAHNER (16)	PSEMEN-(PINCON)/ARCUVA/RACCAN (34)	PSEMEN/ACECIR-(HOLDIS) (13)	PSEMEN/GAUSHA-HOLDIS (45)	PSEMEN/GAUSHA-MAHNER/POLMUN (14)	PSEMEN/GAUSHA-VACPAR (22)	PSEMEN-TSUHET/GAUSHA-HOLDIS (19)	PSEMEN-TSUHET/GAUSHA-VACPAR (64)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Acer glabrum</i> var. <i>douglasii</i>	S	69, 7	9, 1	54, 7	2, 8	7, 1	45, 2	–	3, 1
<i>Rosa gymnocarpa</i>	S	62, 2	38, 2	15, 2	91, 3	79, 4	82, 2	63, 4	8, 1
<i>Paxistima myrsinites</i>	S	44, 6	82, 3	46, 8	9, 2	–	23, 1	5, 3	12, 0.1
<i>Rubus nutkanus</i>	S	56, 2	–	23, 0.1	–	–	–	–	–
<i>Spiraea lucida</i>	S	25, 1	62, 1	8, 1	–	–	14, 1	–	6, 0.1
<i>Amelanchier alnifolia</i>	S	31, 3	50, 1	54, 1	40, 3	7, 1	23, 0.1	5, 3	3, 0.1
<i>Vaccinium membranaceum</i>	S	6, 1	59, 4	–	–	–	5, 4	–	14, 1
<i>Holodiscus discolor</i>	S	12, 1	29, 3	46, 3	91, 13	50, 5	18, 1	100, 8	3, 2
<i>Gaultheria shallon</i>	S	12, 8	38, 4	15, 8	100, 58	43, 8	100, 48	100, 50	100, 43
<i>Vaccinium parvifolium</i>	S	6, 3	24, 1	15, 2	40, 2	29, 2	68, 1	47, 6	95, 4
<i>Mahonia nervosa</i>	SS	94, 18	35, 1	8, 5	89, 6	100, 34	95, 9	74, 6	72, 2
<i>Arctostaphylos uva-ursi</i>	SS	–	91, 21	8, 1	4, 2	–	23, 10	5, 10	3, 3
<i>Chimaphila umbellata</i> ssp. <i>umbellata</i>	SS	38, 1	56, 2	8, 7	16, 3	21, 2	77, 3	16, 5	64, 2
<i>Rubus ursinus</i>	SS	38, 2	–	15, 2	76, 3	71, 2	27, 1	42, 2	8, 0.1
<i>Linnaea borealis</i>	SS	19, 4	38, 2	8, 0.1	40, 3	43, 5	73, 3	37, 5	66, 2
<i>Pteridium aquilinum</i>	Fe	44, 2	9, 14	15, 4	49, 5	21, 8	45, 2	53, 2	30, 2
<i>Cryptogramma acrostichoides</i>	Fe	–	29, 1	54, 1	–	–	5, 0.1	–	–
<i>Polystichum munitum</i>	Fe	25, 4	6, 1	23, 0.1	78, 4	100, 33	27, 1	63, 3	16, 2
<i>Lysimachia latifolia</i>	F	75, 2	6, 2	–	49, 1	86, 2	55, 1	32, 2	12, 0.1
<i>Goodyera oblongifolia</i>	F	44, 1	26, 1	–	38, 1	64, 1	32, 1	26, 1	36, 0.1
<i>Hieracium albiflorum</i>	F	6, 0.1	68, 1	31, 1	11, 1	7, 1	45, 1	5, 0.1	5, 1
<i>Achlys triphylla</i>	F	–	3, 0.1	8, 0.1	11, 2	86, 8	50, 3	32, 4	11, 2
<i>Adenocaulon bicolor</i>	F	19, 1	–	–	13, 1	57, 2	9, 2	5, 0.1	2, 2

Abbrev (Plot Count)		BETPAP-(THUPLI)/ACECIR/MAHNER (16)	PSEMEN-(PINCON)/ARCUVA/RACCAN (34)	PSEMEN/ACECIR-(HOLDIS) (13)	PSEMEN/GAUSHA-HOLDIS (45)	PSEMEN/GAUSHA-MAHNER/POLMUN (14)	PSEMEN/GAUSHA-VACPAR (22)	PSEMEN-TSUHET/GAUSHA-HOLDIS (19)	PSEMEN-TSUHET/GAUSHA-VACPAR (64)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Galium spp.	F	–	–	–	–	50, 2	–	–	–
Mycelis muralis	F	19, 1	–	8, 0.1	4, 0.1	50, 2	–	–	–
Vicia americana var. americana	F	–	–	–	2, 0.1	43, 1	–	11, 0.1	–
Viola sempervirens	F	–	–	–	7, 0.1	50, 1	18, 1	5, 0.1	8, 0.1
Festuca occidentalis	G	–	32, 2	15, 0.1	53, 2	36, 2	59, 1	37, 1	2, 2
Bromus vulgaris	G	–	3, 1	–	27, 1	57, 2	9, 1	11, 0.1	–
Undifferentiated Lichen	L	–	15, 5	69, 11	–	–	14, 2	–	2, 5
Undifferentiated Moss	M	31, 8	50, 35	85, 25	40, 26	36, 20	59, 29	58, 31	86, 41
Eurhynchium oreganum	M	19, 2	3, 1	–	2, 1	57, 16	18, 14	–	6, 26
Hylocomium splendens	M	31, 36	18, 30	–	2, 20	43, 18	23, 18	–	16, 47
Rhytidiadelphus triquetrus	M	25, 7	12, 1	–	–	43, 13	14, 5	–	2, 10



G241 North Pacific Maritime Silver Fir - Western Hemlock Forest

**Table A-10.** Synoptic table for A3386 *Abies amabilis* - *Tsuga heterophylla* / *Achlys triphylla* Forest.

Abbrev (Plot Count)		ABIAMA-(PSEMEN)/ ACHTRI-TIATRI (18)	ABIAMA-PSEMEN/ ACHTRI (23)	ABIAMA-TSUHET/ (ORTSEC-CHIMEN) (72)	ABIAMA-TSUHET/ RUBPED-TIATRI (35)	ABIAMA/ POLMUN (20)	TSUHET-(ABIAMA)/ GAUSHA/BLESPI (2)	TSUHET-ABIAMA- (THUPLI)/VACALA/ BLESPI (10)	TSUHET-ABIAMA- PSEMEN/GAUSHA (18)	TSUHET-ABIAMA- PSEMEN/MAHNER (32)	TSUHET-ABIAMA/ OXAOORE-BLESPI (5)	TSUHET-ABIAMA/ VACALA/TIATRI (32)	TSUHET-THUPLI/ GAUSHA/BLESPI (11)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Tsuga heterophylla</i> (overstory)	CT	44, 11	78, 30	100, 36	71, 29	95, 33	100, 40	100, 34	100, 34	84, 30	100, 33	94, 27	100, 27
<i>Abies amabilis</i> (overstory)	CT	56, 28	70, 13	94, 16	74, 27	95, 17	50, 10	100, 22	78, 14	81, 14	100, 17	94, 30	–
<i>Pseudotsuga menziesii</i> (overstory)	CT	39, 21	78, 27	78, 11	31, 7	55, 9	–	30, 1	100, 17	78, 13	80, 14	6, 8	–
<i>Thuja plicata</i> (overstory)	CT	–	17, 4	46, 5	43, 11	50, 7	50, 5	50, 15	72, 10	69, 12	40, 10	6, 6	91, 16
<i>Picea sitchensis</i> (overstory)	CT	–	–	–	–	5, 1	50, 5	–	–	–	–	3, 5	91, 5
<i>Abies amabilis</i> (understory)	CT	50, 15	61, 13	90, 9	69, 10	65, 4	50, 25	80, 11	100, 14	69, 15	80, 9	78, 11	–
<i>Tsuga heterophylla</i> (understory)	CT	33, 13	70, 12	88, 5	69, 8	85, 12	100, 5	80, 10	94, 15	81, 10	100, 11	84, 11	100, 19
<i>Thuja plicata</i> (understory)	CT	–	22, 3	40, 3	20, 2	25, 1	50, 5	20, 1	56, 4	66, 5	–	3, 0.1	64, 6

Abbrev (Plot Count)		ABIAMA-(PSEMEN)/ ACHTRI-TIATRI (18)	ABIAMA-PSEMEN/ ACHTRI (23)	ABIAMA-TSUHET/ (ORTSEC-CHIMEN) (72)	ABIAMA-TSUHET/ RUBPED-TIATRI (35)	ABIAMA/ POLMUN (20)	TSUHET-(ABIAMA)/ GAUSHA/BLESPI (2)	TSUHET-ABIAMA- (THUPLI)/VACALA/ BLESPI (10)	TSUHET-ABIAMA- PSEMEN/GAUSHA (18)	TSUHET-ABIAMA- PSEMEN/MAHNER (32)	TSUHET-ABIAMA/ OXAOORE-BLESPI (5)	TSUHET-ABIAMA/ VACALA/TIATRI (32)	TSUHET-THUPLI/ GAUSHA/BLESPI (11)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Taxus brevifolia (understory)	CT	–	4, 1	21, 3	14, 1	5, 0.1	–	–	17, 1	59, 6	–	–	–
Abies amabilis (unknown)	CT	<b>44, 22</b>	<b>22, 15</b>	–	<b>23, 19</b>	<b>5, 10</b>	–	–	–	<b>16, 12</b>	–	<b>6, 28</b>	–
Vaccinium ovalifolium	S	50, 3	39, 1	54, 1	71, 3	90, 7	<b>100, 12</b>	<b>100, 22</b>	<b>67, 13</b>	59, 6	<b>80, 25</b>	<b>100, 26</b>	91, 9
Vaccinium parvifolium	S	39, 5	57, 3	58, 1	63, 3	90, 9	<b>100, 12</b>	100, 9	94, 7	81, 3	80, 2	66, 6	45, 6
Acer circinatum	S	17, 3	<b>57, 15</b>	10, 2	34, 8	25, 3	–	–	17, 4	53, 8	40, 8	9, 6	–
Vaccinium membranaceum	S	39, 2	35, 1	46, 1	23, 4	–	–	–	33, 4	50, 2	–	12, 4	–
Oplopanax horridus	S	28, 2	13, 5	6, 1	49, 2	40, 0.1	–	50, 4	11, 2	6, 1	40, 3	50, 3	–
Rubus spectabilis	S	17, 1	–	3, 0.1	37, 2	60, 4	<b>50, 10</b>	50, 1	–	9, 1	20, 0.1	72, 5	<b>64, 12</b>
Rhododendron menziesii	S	22, 1	–	18, 0.1	26, 2	10, 0.1	<b>100, 10</b>	60, 3	17, 1	31, 2	40, 8	41, 4	82, 6
Gaultheria shallon	S	–	4, 8	3, 1	3, 1	20, 1	<b>100, 20</b>	30, 2	<b>100, 20</b>	25, 2	–	–	<b>100, 25</b>
Paxistima mysrinites	S	–	9, 2	29, 0.1	3, 0.1	5, 0.1	–	–	6, 0.1	53, 3	–	–	–
Vaccinium ovatum	S	–	–	–	–	–	–	–	–	–	–	–	73, 7
Linnaea borealis	SS	<b>33, 12</b>	78, 3	60, 1	46, 7	15, 1	–	20, 2	67, 2	88, 5	<b>20, 10</b>	3, 0.1	–

Abbrev (Plot Count)		ABIAMA-(PSEMEN)/ ACHTRI-TIATRI (18)	ABIAMA-PSEMEN/ ACHTRI (23)	ABIAMA-TSUHET/ (ORTSEC-CHIMEN) (72)	ABIAMA-TSUHET/ RUBPED-TIATRI (35)	ABIAMA/ POLMUN (20)	TSUHET-(ABIAMA)/ GAUSHA/BLESPI (2)	TSUHET-ABIAMA- (THUPLI)/VACALA/ BLESPI (10)	TSUHET-ABIAMA- PSEMEN/GAUSHA (18)	TSUHET-ABIAMA- PSEMEN/MAHNER (32)	TSUHET-ABIAMA/ OXAOORE-BLESPI (5)	TSUHET-ABIAMA/ VACALA/TIATRI (32)	TSUHET-THUPLI/ GAUSHA/BLESPI (11)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Mahonia nervosa	SS	11, 3	61, 5	36, 1	11, 6	–	–	–	56, 3	94, 7	–	–	–
Chimaphila umbellata ssp. umbellata	SS	6, 10	39, 2	47, 1	17, 1	–	–	10, 1	56, 2	81, 3	–	–	–
Chimaphila menziesii	SS	28, 0.1	26, 0.1	51, 0.1	17, 0.1	5, 0.1	–	10, 1	22, 0.1	56, 1	–	9, 0.1	–
Polystichum munitum	Fe	28, 1	43, 5	10, 0.1	51, 2	100, 15	50, 5	50, 1	28, 2	25, 1	80, 14	28, 7	64, 6
Struthiopteris spicant	Fe	6, 3	4, 1	6, 1	57, 5	90, 7	100, 4	100, 11	11, 3	9, 0.1	60, 3	50, 5	100, 11
Dryopteris expansa	Fe	6, 1	–	1, 0.1	43, 3	40, 3	–	–	–	3, 0.1	–	25, 4	–
Gymnocarpium dryopteris	Fe	28, 8	4, 0.1	7, 0.1	57, 3	30, 6	50, 1	30, 3	–	3, 0.1	80, 4	72, 5	–
Athyrium filix- femina	Fe	17, 4	9, 2	6, 1	37, 3	70, 4	–	60, 2	11, 1	–	20, 5	75, 6	9, 5
Achlys triphylla	F	100, 12	74, 8	–	31, 4	45, 4	–	40, 6	17, 1	16, 3	100, 3	72, 6	–
Clintonia uniflora	F	94, 3	43, 3	21, 1	66, 2	60, 2	–	90, 7	22, 1	47, 3	40, 4	84, 4	–
Tiarella trifoliata	F	89, 4	22, 6	17, 0.1	100, 4	100, 7	–	80, 2	11, 2	19, 1	60, 4	97, 6	9, 5
Orthilia secunda	F	44, 4	35, 0.1	64, 1	31, 1	10, 0.1	–	20, 0.1	11, 2	47, 1	–	9, 2	–
Streptopus lanceolatus	F	56, 2	9, 2	3, 0.1	46, 2	20, 1	–	50, 3	–	12, 0.1	20, 2	66, 3	–
Viola orbiculata	F	50, 1	4, 0.1	1, 0.1	20, 0.1	5, 0.1	–	–	–	9, 1	–	–	–

Abbrev (Plot Count)		ABIAMA-(PSEMEN)/ ACHTRI-TIATRI (18)	ABIAMA-PSEMEN/ ACHTRI (23)	ABIAMA-TSUHET/ (ORTSEC-CHIMEN) (72)	ABIAMA-TSUHET/ RUBPED-TIATRI (35)	ABIAMA/ POLMUN (20)	TSUHET-(ABIAMA)/ GAUSHA/BLESPI (2)	TSUHET-ABIAMA- (THUPLI)/VACALA/ BLESPI (10)	TSUHET-ABIAMA- PSEMEN/GAUSHA (18)	TSUHET-ABIAMA- PSEMEN/MAHNER (32)	TSUHET-ABIAMA/ OXAOORE-BLESPI (5)	TSUHET-ABIAMA/ VACALA/TIATRI (32)	TSUHET-THUPLI/ GAUSHA/BLESPI (11)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Rubus lasiococcus	F	44, 2	35, 1	18, 0.1	14, 1	5, 5	–	20, 6	6, 1	25, 1	–	9, 1	–
Goodyera oblongifolia	F	39, 1	30, 1	47, 0.1	37, 0.1	15, 0.1	–	10, 0.1	33, 1	59, 1	–	3, 0.1	–
Rubus pedatus	F	39, 2	4, 0.1	14, 0.1	80, 4	45, 4	–	90, 6	6, 0.1	9, 2	60, 5	78, 6	–
Cornus unalaschkensis	F	33, 2	39, 3	19, 1	54, 3	40, 2	–	40, 2	22, 1	66, 4	80, 9	31, 3	–
Trillium ovatum	F	33, 0.1	22, 0.1	7, 0.1	43, 0.1	15, 0.1	–	20, 1	22, 0.1	16, 1	–	22, 0.1	9, 0.1
Maianthemum dilatatum	F	22, 2	4, 1	–	20, 1	30, 3	50, 1	20, 2	22, 1	–	20, 2	31, 4	55, 5
Lysichiton americanus	F	–	–	–	–	–	50, 1	10, 1	11, 1	–	–	3, 15	36, 3
Moneses uniflora	F	6, 0.1	–	1, 0.1	3, 0.1	5, 1	50, 1	10, 1	–	–	–	–	18, 1
Pyrola asarifolia	F	–	4, 0.1	21, 0.1	9, 0.1	–	–	–	6, 1	41, 1	–	–	–
Oxalis oregana	F	–	–	–	–	10, 3	–	10, 1	–	–	100, 17	–	–
Undifferentiated Moss	M	67, 16	48, 21	96, 28	80, 35	60, 28	50, 78	50, 28	67, 37	75, 41	80, 25	59, 29	73, 24

**Table A-11.** Synoptic table for A3387 *Abies amabilis* - *Tsuga heterophylla* / *Vaccinium membranaceum* Cold Forest.

Abbrev (Plot Count)		ABIAMA- (PSEMEN- ABIPRO)/ VACMEM/ XERTEN (16)	ABIAMA- (TSUTHE)/ VACMEM- VACALA (24)	ABIAMA- (TSUHET)/ VACMEM/ ORTSEC (49)	ABIAMA/ MENFER (6)	TSUHET- ABIAMA- (PSEMEN)/ VACALA (77)	TSUHET- ABIAMA/ VACALA/ RUBPED (44)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Abies amabilis</i> (overstory)	CT	<b>69, 21</b>	<b>79, 29</b>	<b>100, 32</b>	<b>100, 26</b>	<b>81, 24</b>	<b>91, 23</b>
<i>Pseudotsuga menziesii</i> (overstory)	CT	<b>44, 14</b>	29, 4	41, 9	67, 8	<b>52, 11</b>	39, 8
<i>Tsuga heterophylla</i> (overstory)	CT	<b>38, 33</b>	<b>67, 17</b>	<b>53, 12</b>	83, 8	<b>84, 28</b>	<b>91, 27</b>
<i>Callitropsis nootkatensis</i> (overstory)	CT	<b>38, 16</b>	<b>79, 14</b>	31, 7	<b>17, 25</b>	9, 8	7, 4
<i>Abies amabilis</i> (understory)	CT	<b>69, 13</b>	<b>83, 13</b>	<b>98, 14</b>	<b>100, 13</b>	<b>82, 16</b>	<b>86, 12</b>
<i>Tsuga heterophylla</i> (understory)	CT	56, 5	58, 4	51, 3	100, 2	79, 9	<b>86, 10</b>
<i>Callitropsis nootkatensis</i> (understory)	CT	19, 1	75, 3	33, 2	33, 4	6, 2	5, 3
<i>Vaccinium membranaceum</i>	S	100, 7	<b>100, 10</b>	<b>100, 18</b>	<b>100, 10</b>	23, 3	30, 3
<i>Vaccinium ovalifolium</i>	S	31, 3	<b>96, 19</b>	27, 2	<b>33, 12</b>	<b>100, 15</b>	<b>100, 33</b>
<i>Rhododendron menziesii</i>	S	31, 1	58, 6	29, 3	<b>100, 23</b>	35, 1	55, 3
<i>Paxistima myrsinites</i>	S	25, 1	21, 1	45, 3	33, 4	6, 2	2, 1
<i>Sorbus sitchensis</i>	S	6, 1	21, 0.1	37, 3	67, 2	3, 0.1	11, 2
<i>Vaccinium parvifolium</i>	S	25, 1	25, 1	6, 1	–	70, 3	48, 6
<i>Linnaea borealis</i>	SS	12, 1	17, 1	10, 6	17, 0.1	44, 3	48, 4
<i>Chimaphila menziesii</i>	SS	12, 1	33, 0.1	10, 1	–	48, 0.1	14, 0.1
<i>Xerophyllum tenax</i>	F	<b>100, 26</b>	21, 1	10, 3	–	5, 9	2, 0.1
<i>Goodyera oblongifolia</i>	F	44, 1	67, 1	35, 0.1	33, 0.1	43, 0.1	23, 0.1
<i>Rubus lasiococcus</i>	F	50, 1	33, 3	59, 8	83, 5	16, 1	20, 2
<i>Orthilia secunda</i>	F	38, 1	71, 1	86, 2	83, 1	45, 1	30, 1

Abbrev (Plot Count)		ABIAMA- (PSEMEN- ABIPRO)/ VACMEM/ XERTEN (16)	ABIAMA- (TSUTHE)/ VACMEM- VACALA (24)	ABIAMA- (TSUHET)/ VACMEM/ ORTSEC (49)	ABIAMA/ MENFER (6)	TSUHET- ABIAMA- (PSEMEN)/ VACALA (77)	TSUHET- ABIAMA/ VACALA/ RUBPED (44)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Clintonia uniflora	F	19, 2	58, 3	63, 5	67, 6	35, 1	77, 5
Tiarella trifoliata	F	12, 3	42, 2	53, 2	67, 1	19, 1	41, 2
Rubus pedatus	F	12, 0.1	58, 2	35, 6	50, 3	36, 1	89, 4
Streptopus lanceolatus	F	<b>6, 10</b>	33, 1	41, 3	67, 3	3, 0.1	27, 1
Valeriana sitchensis	F	6, 5	21, 4	41, 2	33, 0.1	–	5, 1
Cornus unalaschkensis	F	6, 3	21, 1	2, 0.1	–	43, 2	66, 5
Undifferentiated Moss	M	62, 8	<b>67, 13</b>	<b>76, 12</b>	67, 8	<b>90, 35</b>	<b>86, 36</b>

G751 North Pacific Western Hemlock - Sitka Spruce - Western Red-cedar Seasonal Rainforest

**Table A-12.** Synoptic table for G751 North Pacific Western Hemlock - Sitka Spruce - Western Red-cedar Seasonal Rainforest.

Alliance		A3604 Tsuga heterophylla - Picea sitchensis / Rhytidiadelphus loreus Forest				A3610 Tsuga heterophylla - Thuja plicata / Blechnum spicant Rich Mesic Forest	
Abbrev (Plot Count)		PICSIT/GAUSHA (37)	PICSIT/MAIDIL (3)	PICSIT/VACOVAT (8)	THUPLI-TSUHET/ VACOVAT- GAUSHA (58)	PICSIT-TSUHET/ POLMUN- OXAORE (27)	PICSIT-TSUHET/ POLMUN (19)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Tsuga heterophylla (overstory)	CT	<b>95, 31</b>	100, 7	<b>100, 26</b>	<b>100, 20</b>	<b>100, 21</b>	<b>95, 23</b>
Picea sitchensis (overstory)	CT	<b>100, 17</b>	<b>100, 57</b>	<b>100, 10</b>	33, 4	<b>100, 22</b>	<b>95, 42</b>

Abbrev (Plot Count)		PICSIT/GAUSHA (37)	PICSIT/MAIDIL (3)	PICSIT/VACOVAT (8)	THUPLI-TSUHET/ VACOVAT- GAUSHA (58)	PICSIT-TSUHET/ POLMUN- OXAORE (27)	PICSIT-TSUHET/ POLMUN (19)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Thuja plicata (overstory)	CT	<b>24, 13</b>	100, 6	<b>88, 20</b>	<b>98, 18</b>	<b>26, 12</b>	16, 5
Tsuga heterophylla (understory)	CT	<b>92, 20</b>	–	<b>100, 14</b>	<b>95, 11</b>	93, 9	68, 7
Thuja plicata (understory)	CT	14, 6	–	62, 6	83, 6	15, 5	5, 5
Picea sitchensis (understory)	CT	8, 3	–	25, 0.1	5, 3	<b>78, 11</b>	32, 3
Gaultheria shallon	S	<b>100, 37</b>	67, 1	<b>100, 11</b>	<b>100, 26</b>	11, 1	<b>89, 6</b>
Rhododendron menziesii	S	92, 3	–	25, 4	72, 6	11, 2	42, 3
Vaccinium parvifolium	S	84, 6	–	38, 3	57, 6	85, 6	63, 2
Rubus spectabilis	S	84, 9	–	38, 1	34, 8	67, 7	74, 6
Vaccinium ovalifolium	S	<b>70, 10</b>	–	12, 1	<b>64, 10</b>	<b>56, 10</b>	32, 5
Vaccinium ovatum	S	16, 4	100, 5	<b>100, 32</b>	<b>100, 32</b>	–	32, 3
Lonicera involucrata	S	3, 1	67, 1	–	–	–	16, 2
Acer circinatum	S	–	–	–	–	<b>78, 16</b>	–
Polystichum munitum	F	<b>95, 10</b>	100, 1	<b>25, 10</b>	7, 6	<b>100, 20</b>	<b>100, 41</b>
Struthiopteris spicant	F	95, 7	33, 3	75, 5	<b>100, 10</b>	63, 3	95, 4
Athyrium filix-femina	F	30, 1	–	12, 5	2, 7	48, 3	74, 1
Maianthemum dilatatum	F	35, 3	<b>100, 70</b>	–	50, 4	63, 5	79, 2
Lysichiton americanus	F	35, 2	67, 3	38, 2	57, 3	4, 3	5, 0.1
Cornus unalaschkensis	F	–	–	–	43, 2	<b>11, 10</b>	–
Oxalis oregana	F	5, 3	–	–	–	<b>93, 18</b>	<b>16, 11</b>

Abbrev (Plot Count)		PICSIT/GAUSHA (37)	PICSIT/MAIDIL (3)	PICSIT/VACOVAT (8)	THUPLI-TSUHET/ VACOVAT- GAUSHA (58)	PICSIT-TSUHET/ POLMUN- OXAORE (27)	PICSIT-TSUHET/ POLMUN (19)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Tiarella trifoliata	F	8, 1	–	12, 3	2, 1	78, 6	11, 2
Luzula parviflora	Gr	3, 0.1	–	–	–	37, 1	42, 1
Undifferentiated Moss	M	76, 27	33, 75	75, 31	72, 31	78, 35	42, 20
Eurhynchium oreganum	M	3, 1	67, 65	–	12, 2	4, 30	47, 9

**M025 Vancouverian Subalpine-High Montane Forest**

G849 North-Central Pacific Mountain Hemlock - Silver Fir Woodland

**Table A-13.** Synoptic table for A3723 *Tsuga mertensiana* - *Abies amabilis* Forest & Woodland.

Abbrev (Plot Count)		ABIAMA/ RHOALB (9)	ABIAMA- TSUMER/ MENFER (13)	ABIAMA- TSUMER/ STRLAN (10)	ABIAMA- TSUMER/ VACMEM/ RUBLAS (44)	TSUMER- ABIAMA/ RHOALB (77)	TSUMER- ABIAMA/ VACALA/ RUBPED (34)	TSUMER- ABIAMA/ VACMEM/ XERTEN (4)	TSUMER- ABIAMA/ VACMEM/ VALSIT (4)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Abies amabilis</i> (overstory)	CT	100, 31	100, 27	100, 36	100, 28	96, 23	91, 21	100, 7	50, 9
<i>Callitropsis nootkatensis</i> (overstory)	CT	67, 9	85, 6	40, 10	45, 5	49, 7	65, 9	50, 10	50, 5
<i>Tsuga mertensiana</i> (overstory)	CT	44, 2	100, 15	80, 17	100, 14	99, 16	94, 18	100, 26	100, 21
<i>Abies lasiocarpa</i> ssp. <i>lasiocarpa</i> (overstory)	CT	44, 6	8, 4	10, 5	20, 6	44, 7	–	100, 17	50, 14



Abbrev (Plot Count)		ABIAMA/ RHOALB (9)	ABIAMA- TSUMER/ MENFER (13)	ABIAMA- TSUMER/ STRLAN (10)	ABIAMA- TSUMER/ VACMEM/ RUBLAS (44)	TSUMER- ABIAMA/ RHOALB (77)	TSUMER- ABIAMA/ VACALA/ RUBPED (34)	TSUMER- ABIAMA/ VACMEM/ XERTEN (4)	TSUMER- ABIAMA/ VACMEM/ VALSIT (4)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Tsuga heterophylla</i> (overstory)	CT	22, 4	69, 6	10, 0.1	9, 3	5, 8	35, 9	–	–
<i>Abies amabilis</i> (understory)	CT	100, 9	100, 14	100, 11	98, 13	95, 11	88, 14	100, 4	50, 14
<i>Tsuga mertensiana</i> (understory)	CT	44, 1	100, 4	80, 3	93, 4	90, 4	82, 8	100, 8	75, 7
<i>Callitropsis nootkatensis</i> (understory)	CT	56, 1	62, 2	50, 3	43, 3	39, 3	62, 6	75, 2	50, 2
<i>Abies lasiocarpa</i> ssp. <i>lasiocarpa</i> (understory)	CT	11, 0.1	8, 0.1	–	9, 3	26, 2	–	100, 6	50, 5
<i>Tsuga heterophylla</i> (understory)	CT	22, 2	77, 2	30, 2	11, 1	3, 2	29, 4	–	–
<i>Abies amabilis</i> (unknown)	CT	–	–	–	–	–	6, 23	–	–
<i>Callitropsis nootkatensis</i> (unknown)	CT	–	–	–	–	–	9, 19	–	–
<i>Vaccinium</i> <i>membranaceum</i>	S	89, 17	100, 20	90, 16	100, 23	96, 16	50, 11	100, 24	100, 23
<i>Rhododendron albiflorum</i>	S	100, 15	23, 8	50, 1	48, 1	100, 23	38, 11	–	50, 2
<i>Sorbus sitchensis</i>	S	33, 1	54, 2	60, 0.1	41, 2	51, 3	26, 1	50, 2	100, 3
<i>Rhododendron menziesii</i>	S	22, 20	100, 12	60, 2	43, 1	30, 9	44, 3	–	25, 3
<i>Vaccinium ovalifolium</i>	S	11, 2	92, 19	70, 8	36, 3	23, 8	100, 37	–	–
<i>Paxistima myrsinites</i>	S	–	–	–	14, 0.1	10, 0.1	–	50, 1	–
<i>Vaccinium deliciosum</i>	SS	–	–	–	27, 6	27, 8	6, 1	75, 8	50, 1
<i>Gaultheria ovatifolia</i>	SS	–	31, 1	–	14, 0.1	1, 0.1	3, 1	50, 3	–
<i>Gymnocarpium dryopteris</i>	Fe	–	23, 0.1	50, 1	7, 2	12, 3	6, 12	–	–
<i>Struthiopteris spicant</i>	Fe	11, 1	15, 1	20, 1	5, 0.1	6, 1	47, 4	–	–

Abbrev (Plot Count)		ABIAMA/ RHOALB (9)	ABIAMA- TSUMER/ MENFER (13)	ABIAMA- TSUMER/ STRLAN (10)	ABIAMA- TSUMER/ VACMEM/ RUBLAS (44)	TSUMER- ABIAMA/ RHOALB (77)	TSUMER- ABIAMA/ VACALA/ RUBPED (34)	TSUMER- ABIAMA/ VACMEM/ XERTEN (4)	TSUMER- ABIAMA/ VACMEM/ VALSIT (4)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Unidentified Fern	Fe	–	–	–	–	–	–	50, 2	–
Rubus lasiococcus	F	<b>67, 10</b>	23, 2	60, 2	43, 2	66, 6	26, 2	75, 1	25, 5
Rubus pedatus	F	44, 3	62, 1	80, 4	48, 2	45, 4	76, 5	25, 1	50, 1
Orthilia secunda	F	56, 2	85, 1	40, 0.1	59, 1	49, 1	21, 2	50, 1	50, 0.1
Valeriana sitchensis	F	44, 6	–	50, 2	25, 2	48, 3	24, 3	–	100, 8
Streptopus lanceolatus	F	11, 1	8, 0.1	80, 3	23, 1	21, 2	24, 1	–	50, 2
Tiarella trifoliata	F	33, 1	–	90, 4	18, 1	30, 2	32, 3	–	50, 1
Clintonia uniflora	F	–	23, 1	60, 3	18, 1	6, 2	32, 1	–	50, 1
Veratrum viride	F	22, 1	8, 0.1	40, 1	20, 1	32, 1	12, 1	–	75, 1
Goodyera oblongifolia	F	33, 1	46, 0.1	40, 1	18, 0.1	6, 0.1	24, 0.1	25, 1	–
Erythronium montanum	F	<b>33, 13</b>	<b>15, 25</b>	<b>20, 10</b>	23, 5	<b>32, 12</b>	<b>47, 10</b>	50, 9	<b>25, 10</b>
Xerophyllum tenax	F	22, 8	8, 0.1	30, 1	14, 9	19, 5	21, 3	<b>100, 22</b>	–
Hieracium albiflorum	F	–	–	–	–	–	–	50, 1	–
Moehringia macrophylla	F	–	–	–	2, 0.1	–	–	50, 2	–
Nothochelone nemorosa	F	11, 2	–	–	2, 0.1	–	–	50, 2	–
Arnica latifolia	F	22, 4	–	10, 2	9, 1	31, 2	9, 2	–	50, 4
Luzula hitchcockii	Gr	22, 1	–	–	9, 0.1	13, 1	–	50, 1	25, 2
Undifferentiated Moss	M	11, 2	<b>69, 17</b>	40, 4	<b>73, 11</b>	<b>43, 11</b>	<b>59, 16</b>	25, 2	–
Rhytidiadelphus squarrosus	M	–	–	–	–	–	–	50, 1	–

**Table A-14.** Synoptic table for A3726 *Abies amabilis* - *Tsuga mertensiana* - *Abies lasiocarpa* Cascadian Forest & Woodland.

Abbrev (Plot Count)		ABILAS-(ABIAMA)/ VACMEM/XERTEN (6)	ABILAS-ABIAMA/ VACMEM/VALSIT (41)	ABILAS- TSUMER/FESVIR (5)	ABILAS/VACDEL (44)	ABILAS/VALSIT- RUBLAS (46)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Abies lasiocarpa</i> ssp. <i>lasiocarpa</i> (overstory)	CT	100, 25	100, 24	100, 17	98, 23	93, 34
<i>Callitropsis nootkatensis</i> (overstory)	CT	100, 4	5, 21	–	9, 1	22, 10
<i>Abies amabilis</i> (overstory)	CT	50, 17	71, 12	20, 5	16, 4	28, 7
<i>Tsuga mertensiana</i> (overstory)	CT	50, 5	27, 2	–	66, 4	26, 4
<i>Picea engelmannii</i> (overstory)	CT	–	78, 21	–	20, 2	7, 12
<i>Pinus albicaulis</i> (overstory)	CT	–	–	60, 2	11, 1	–
<i>Abies amabilis</i> (understory)	CT	100, 5	100, 7	–	30, 3	39, 5
<i>Abies lasiocarpa</i> ssp. <i>lasiocarpa</i> (understory)	CT	67, 4	78, 5	100, 6	93, 12	80, 7
<i>Picea engelmannii</i> (understory)	CT	–	44, 1	–	9, 2	7, 0.1
<i>Pinus albicaulis</i> (understory)	CT	–	–	80, 3	30, 1	2, 1
<i>Tsuga mertensiana</i> (understory)	CT	33, 3	29, 2	–	57, 2	17, 3
<i>Vaccinium membranaceum</i>	S	100, 10	100, 28	–	75, 11	61, 4
<i>Paxistima myrsinites</i>	S	–	66, 4	–	36, 8	9, 1
<i>Sorbus sitchensis</i>	S	33, 2	51, 1	–	68, 3	39, 3
<i>Rhododendron albiflorum</i>	S	17, 0.1	46, 2	–	30, 5	9, 4

Abbrev (Plot Count)		ABILAS-(ABIAMA)/ VACMEM/XERTEN (6)	ABILAS-ABIAMA/ VACMEM/VALSIT (41)	ABILAS- TSUMER/FESVIR (5)	ABILAS/VACDEL (44)	ABILAS/VALSIT- RUBLAS (46)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Phyllodoce empetriformis	SS	50, 8	–	–	70, 6	7, 1
Vaccinium deliciosum	SS	<b>33, 20</b>	10, 3	–	<b>100, 29</b>	24, 2
Erythronium montanum	F	<b>83, 19</b>	<b>5, 20</b>	–	<b>23, 11</b>	<b>30, 12</b>
Xerophyllum tenax	F	<b>83, 19</b>	2, 3	–	5, 6	11, 6
Rubus lasiococcus	F	67, 2	<b>76, 16</b>	20, 1	50, 5	<b>67, 15</b>
Valeriana sitchensis	F	33, 5	<b>90, 9</b>	<b>80, 4</b>	<b>75, 5</b>	<b>89, 16</b>
Orthilia secunda	F	17, 0.1	<b>93, 2</b>	–	14, 1	24, 5
Arnica latifolia	F	17, 1	<b>76, 5</b>	40, 2	<b>77, 2</b>	43, 5
Polemonium pulcherrimum	F	–	46, 1	<b>80, 2</b>	16, 1	39, 3
Veratrum viride	F	33, 2	49, 1	20, 2	48, 3	48, 4
Pedicularis racemosa	F	–	46, 1	–	59, 1	30, 3
Thalictrum occidentale	F	–	54, 1	–	2, 3	24, 2
Tiarella trifoliata	F	17, 3	44, 4	–	–	22, 2
Viola glabella	F	–	46, 1	20, 0.1	2, 3	28, 2
Lupinus latifolius	F	17, 5	37, 2	<b>100, 7</b>	<b>84, 4</b>	59, 6
Eucephalus ledophyllus	F	–	7, 1	<b>80, 8</b>	7, 6	13, 2
Phlox diffusa	F	–	–	<b>80, 4</b>	39, 2	13, 2
Ligusticum grayi	F	–	22, 0.1	<b>60, 2</b>	23, 1	26, 1
Erigeron glacialis var. glacialis	F	–	2, 1	40, 2	43, 2	17, 4
Luetkea pectinata	F	–	–	–	48, 7	9, 5
Pedicularis bracteosa	F	–	15, 1	20, 1	43, 1	15, 1
Viola orbiculata	F	17, 2	37, 2	–	18, 1	41, 3
Luzula hitchcockii	Gr	–	49, 6	40, 4	<b>68, 4</b>	<b>46, 17</b>
Festuca viridula	G	–	–	<b>100, 13</b>	45, 5	11, 5

**Table A-15.** Synoptic table for A3727 *Tsuga mertensiana* - *Abies amabilis* - *Callitropsis nootkatensis* Tree Island and A3729 *Abies lasiocarpa* - *Picea engelmannii* / *Rubus lasiococcus* Cascadian Forest.

Alliance		A3727 <i>Tsuga mertensiana</i> - <i>Abies amabilis</i> - <i>Callitropsis nootkatensis</i> Tree Island					A3729 <i>Abies lasiocarpa</i> - <i>Picea engelmannii</i> / <i>Rubus lasiococcus</i> Cascadian Forest	
Abbrev (Plot Count)		ABILAS- (CALNOO) (15)	CALNOO- (ACECIR- PAXMYR) (6)	TSUMER- ABILAS/ VACDEL- PHYEMP (45)	TSUMER/ PHYEMP- VACDEL (120)	TSUMER (7)	ABILAS- (PINCON)/ JUNCOM- LOMMAR (8)	ABILAS- (PINCON)/ LUPARC (6)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Abies lasiocarpa</i> ssp. <i>lasiocarpa</i> (overstory)	CT	<b>60, 13</b>	17, 0.1	<b>93, 9</b>	19, 2	–	<b>88, 10</b>	<b>100, 26</b>
<i>Callitropsis nootkatensis</i> (overstory)	CT	20, 3	<b>83, 19</b>	36, 5	58, 5	–	12, 0.1	17, 5
<i>Tsuga mertensiana</i> (overstory)	CT	–	–	<b>96, 12</b>	<b>99, 15</b>	–	–	–
<i>Abies amabilis</i> (overstory)	CT	–	–	27, 3	<b>86, 7</b>	–	–	–
<i>Pseudotsuga menziesii</i> (overstory)	CT	7, 1	17, 3	–	–	–	<b>62, 15</b>	–
<i>Abies lasiocarpa</i> ssp. <i>lasiocarpa</i> (understory)	CT	<b>87, 45</b>	67, 1	87, 9	25, 1	<b>100, 26</b>	<b>38, 16</b>	<b>100, 18</b>
<i>Callitropsis nootkatensis</i> (understory)	CT	<b>20, 16</b>	<b>100, 49</b>	64, 4	73, 4	71, 8	12, 0.1	17, 0.1
<i>Tsuga mertensiana</i> (understory)	CT	33, 6	–	<b>91, 10</b>	<b>96, 13</b>	<b>100, 37</b>	–	–
<i>Abies amabilis</i> (understory)	CT	7, 1	–	33, 4	<b>87, 6</b>	14, 2	–	–
<i>Paxistima myrsinites</i>	S	53, 2	50, 2	4, 1	–	–	38, 5	33, 2
<i>Acer circinatum</i>	S	–	50, 4	–	–	–	–	–
<i>Sorbus sitchensis</i>	S	–	17, 1	67, 3	54, 2	29, 0.1	–	17, 8
<i>Vaccinium membranaceum</i>	S	27, 0.1	<b>33, 14</b>	58, 7	<b>80, 6</b>	14, 8	–	17, 1
<i>Rhododendron albiflorum</i>	S	–	–	<b>42, 10</b>	52, 5	14, 2	–	17, 1
<i>Juniperus communis</i>	SS	60, 3	–	7, 1	1, 0.1	14, 0.1	<b>100, 14</b>	<b>83, 2</b>
<i>Phyllodoce empetriformis</i>	SS	40, 3	–	<b>100, 24</b>	<b>100, 26</b>	57, 8	–	17, 2
<i>Vaccinium deliciosum</i>	SS	40, 3	17, 7	<b>100, 25</b>	<b>99, 24</b>	43, 4	–	–

Abbrev (Plot Count)		ABILAS- (CALNOO) (15)	CALNOO- (ACECIR- PAXMYR) (6)	TSUMER- ABILAS/ VACDEL- PHYEMP (45)	TSUMER/ PHYEMP- VACDEL (120)	TSUMER (7)	ABILAS- (PINCON)/ JUNCOM- LOMMAR (8)	ABILAS- (PINCON)/ LUPARC (6)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Cassiope mertensiana	SS	27, 9	–	42, 9	<b>59, 11</b>	57, 9	–	–
Phlox diffusa	F	60, 1	–	7, 4	–	–	88, 5	50, 6
Lupinus latifolius	F	40, 7	17, 2	47, 4	18, 1	29, 2	38, 2	100, 9
Achillea millefolium	F	40, 1	–	2, 1	–	14, 0.1	62, 5	33, 7
Luetkea pectinata	F	33, 2	–	67, 4	71, 4	71, 3	–	<b>33, 16</b>
Erythronium montanum	F	–	–	42, 5	31, 5	–	–	33, 3
Lomatium martindalei	F	27, 1	–	4, 1	1, 0.1	14, 0.1	88, 4	33, 0.1
Hieracium albiflorum	F	20, 1	17, 0.1	–	1, 0.1	–	50, 1	17, 0.1
Unidentified Allium	F	–	–	–	–	–	50, 3	–
Bistorta bistortoides	F	–	17, 0.1	22, 1	6, 1	–	–	50, 2
Polemonium pulcherrimum	F	13, 4	–	–	–	–	–	50, 2
Undifferentiated Lichen	L	20, 2	–	<b>7, 12</b>	31, 6	29, 6	<b>12, 20</b>	50, 7
Undifferentiated Moss	M	33, 3	<b>50, 45</b>	42, 7	<b>61, 11</b>	71, 7	25, 8	50, 8

**M886 Southern Vancouverian Dry Foothill Forest & Woodland**

G800 Southern Vancouverian Dry Douglas-fir - Madrone Woodland

**Table A-16.** Synoptic table for A3716 *Pseudotsuga menziesii* - *Abies grandis* - *Arbutus menziesii* Forest & Woodland.

Abbrev (Plot Count)		PSEMEN/HOLDIS- ROSGYM/FESOCC (50)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover
<i>Pseudotsuga menziesii</i> (overstory)	CT	<b>100, 67</b>
<i>Holodiscus discolor</i>	S	<b>84, 15</b>
<i>Rosa gymnocarpa</i>	S	100, 6
<i>Mahonia aquifolium</i>	S	40, 2
<i>Symphoricarpos albus</i>	S	50, 2
<i>Mahonia nervosa</i>	SS	<b>84, 22</b>
<i>Polystichum munitum</i>	Fe	56, 3
<i>Lysimachia latifolia</i>	F	76, 2
<i>Moehringia macrophylla</i>	F	42, 2
<i>Galium aparine</i>	F	44, 1
<i>Festuca occidentalis</i>	G	<b>80, 5</b>
<i>Melica Sulata</i>	G	42, 4
<i>Bromus vulgaris</i>	G	58, 2

### 1.B.3.Nc Rocky Mountain-Great Basin Montane Flooded & Swamp Forest

#### ***M034 Rocky Mountain-Great Basin Montane Riparian & Swamp Forest***

G505 Rocky Mountain-Great Basin Swamp Forest

G796 Northern Rocky Mountain Lowland & Foothill Riparian Forest

**Table A-17.** Synoptic table for G505 Rocky Mountain-Great Basin Swamp Forest and G796 Northern Rocky Mountain Lowland & Foothill Riparian Forest.

Group		G505		G796
Alliance		A3775 <i>Picea engelmannii</i> Swamp Forest	A3776 <i>Thuja plicata</i> - <i>Tsuga heterophylla</i> Rocky Mountain Swamp Forest	A0311 <i>Populus balsamifera</i> ssp. <i>trichocarpa</i> Northern Rocky Mountain Riparian Forest
Abbrev (Plot Count)		PICENG/EQUARV (16)	THUPLI-TSUHET/OPLHOR (46)	POPBAL/CORSER (36)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Picea engelmannii</i> (overstory)	CT	<b>88, 39</b>	<b>30, 11</b>	22, 5
<i>Abies lasiocarpa</i> (overstory)	CT	<b>62, 12</b>	13, 8	11, 3
<i>Tsuga heterophylla</i> (overstory)	CT	6, 1	<b>72, 22</b>	11, 2
<i>Thuja plicata</i> (overstory)	CT	0, 0	<b>96, 33</b>	25, 2
<i>Abies grandis</i> (overstory)	CT	0, 0	<b>50, 11</b>	8, 6
<i>Abies lasiocarpa</i> (understory)	CT	75, 5	4, 2	8, 6
<i>Picea engelmannii</i> (understory)	CT	69, 6	9, 2	14, 1
<i>Thuja plicata</i> (understory)	CT	25, 2	<b>91, 6</b>	36, 2
<i>Tsuga heterophylla</i> (understory)	CT	12, 2	<b>61, 5</b>	8, 0.1
<i>Populus trichocarpa</i> (overstory)	BT	0, 0	15, 5	<b>100, 33</b>
<i>Populus trichocarpa</i> (understory)	BT	0, 0	4, 0.1	<b>44, 4</b>
<i>Alnus incana</i> ssp. <i>tenuifolia</i>	S	<b>69, 13</b>	17, 4	<b>25, 10</b>
<i>Ribes lacustre</i>	S	44, 3	52, 2	25, 8
<i>Lonicera involucrata</i> var. <i>involucrata</i>	S	44, 3	9, 1	19, 2



Abbrev (Plot Count)		PICENG/EQUARV (16)	THUPLI-TSUHET/OPLHOR (46)	POPBAL/CORSER (36)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Cornus stolonifera	S	38, 6	24, 7	<b>67, 44</b>
Symphoricarpos albus	S	31, 6	13, 3	<b>47, 13</b>
Rubus nutkanus	S	19, 2	46, 2	39, 2
Acer glabrum var. douglasii	S	6, 3	28, 3	42, 8
Oplopanax horridus	S	0, 0	<b>100, 21</b>	19, 3
Linnaea borealis ssp. longiflora	SS	50, 4	39, 3	0, 0
Athyrium filix-femina ssp. cyclosorum	Fe	31, 3	<b>83, 15</b>	28, 3
Gymnocarpium dryopteris	Fe	6, 7	<b>85, 7</b>	6, 1
Equisetum arvense	Fe ally	<b>81, 31</b>	11, 3	14, 3
Maianthemum stellatum	F	<b>75, 3</b>	48, 5	<b>47, 7</b>
Cornus (canadensis, unalaschkensis)	F	<b>69, 4</b>	4, 1	3, 1
Pyrola asarifolia	F	44, 3	20, 2	17, 1
Galium triflorum	F	38, 2	50, 1	17, 1
Tiarella trifoliata	F	38, 4	<b>80, 4</b>	11, 1
Streptopus amplexifolius	F	38, 2	43, 2	8, 1
Actaea rubra	F	12, 3	43, 2	11, 0.1
Clintonia uniflora	F	6, 1	<b>61, 2</b>	19, 3
Circaea alpina	F	0, 0	46, 2	22, 1
Asarum caudatum	F	0, 0	57, 4	14, 1
Calamagrostis canadensis	G	<b>50, 12</b>	0, 0	8, 2
Carex disperma	Gr	<b>56, 13</b>	2, 5	6, 3

### 1.B.3.Ng Vancouverian Flooded & Swamp Forest

#### *M035 Vancouverian Flooded & Swamp Forest*

#### G507 North-Central Pacific Montane Riparian & Seepage Swamp Forest

**Table A-18.** Synoptic table for A3766 *Tsuga (mertensiana, heterophylla) - Abies amabilis* Riparian & Swamp Forest.

Abbrev (Plot Count)		ABIAMA/RUBSPE-VACALA (15)	ABIAMA-TSUHET/OPLHOR (57)	CALNOO/OPLHOR (6)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Abies amabilis</i> (overstory)	CT	<b>93, 18</b>	<b>100, 22</b>	17, 3
<i>Tsuga heterophylla</i> (overstory)	CT	<b>73, 19</b>	<b>93, 24</b>	0, 0
<i>Thuja plicata</i> (overstory)	CT	27, 4	<b>46, 11</b>	0, 0
<i>Callitropsis nootkatensis</i> (overstory)	CT	20, 9	6, 2	<b>83, 32</b>
<i>Abies lasiocarpa</i> (overstory)	CT	0, 0	0, 0	<b>100, 5</b>
<i>Tsuga heterophylla</i> (understory)	CT	<b>73, 9</b>	<b>70, 7</b>	0, 0
<i>Abies amabilis</i> (understory)	CT	<b>67, 7</b>	<b>89, 7</b>	17, 0.1
<i>Callitropsis nootkatensis</i> (understory)	CT	13, 0.1	2, 1	<b>100, 27</b>
<i>Abies lasiocarpa</i> (understory)	CT	0, 0	0, 0	<b>83, 3</b>
<i>Rubus spectabilis</i>	S	<b>100, 28</b>	<b>86, 10</b>	<b>33, 15</b>
<i>Vaccinium ovalifolium</i>	S	<b>93, 13</b>	65, 6	0, 0
<i>Vaccinium ovalifolium</i>	S	<b>93, 13</b>	65, 6	0, 0
<i>Acer circinatum</i>	S	<b>47, 10</b>	30, 8	0, 0
<i>Vaccinium parvifolium</i>	S	40, 3	44, 2	0, 0
<i>Sambucus racemosa</i>	S	40, 3	42, 3	33, 1
<i>Oplopanax horridus</i>	S	33, 3	<b>100, 24</b>	17, 3
<i>Vaccinium membranaceum</i>	S	20, 2	33, 4	<b>67, 7</b>
<i>Alnus viridis</i> ssp. <i>sinuata</i>	S	20, 7	<b>14, 16</b>	<b>100, 30</b>
<i>Ribes lacustre</i>	S	13, 0.1	26, 1	50, 4

Abbrev (Plot Count)		ABIAMA/RUBSPE-VACALA (15)	ABIAMA-TSUHET/OPLHOR (57)	CALNOO/OPLHOR (6)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Rhododendron albiflorum	S	7, 3	4, 9	50, 2
Athyrium filix-femina ssp. cyclosorum	Fe	<b>93, 10</b>	<b>91, 9</b>	17, 1
Gymnocarpium dryopteris	Fe	67, 4	<b>91, 11</b>	0, 0
Polystichum munitum	Fe	53, 3	26, 2	0, 0
Struthiopteris spicant	Fe	40, 3	30, 3	0, 0
Tiarella trifoliata	F	87, 8	93, 7	<b>17, 12</b>
Rubus pedatus	F	80, 6	58, 4	17, 0.1
Streptopus lanceolatus	F	47, 1	44, 4	67, 2
Achlys triphylla	F	40, 6	26, 7	0, 0
Clintonia uniflora	F	33, 3	74, 5	0, 0
Viola glabella	F	20, 3	44, 3	33, 6
Veratrum viride	F	20, 1	7, 3	50, 1
Valeriana sitchensis	F	13, 3	11, 4	67, 2
Erythronium montanum	F	0, 0	0, 0	67, 6
Undifferentiated Moss	M	<b>60, 30</b>	<b>42, 27</b>	33, 4

G851 North-Central Pacific Lowland Riparian Forest

**Table A-19.** Synoptic table for G851 North-Central Pacific Lowland Riparian Forest.

<b>Alliance</b>		A4428 Populus balsamifera ssp. trichocarpa - Alnus rubra - Fraxinus latifolia Riparian Forest														A4430 Alnus rubra - Acer macrophyllum - Alnus viridis Lower Montane Riparian & Swamp Forest	
<b>Abbrev (Plot Count)</b>		PICSIT-(ALNRUB)/RUBSPE/POLMUN (9)	ACEMAC/OXAORE (16)	ACEMAC/POLMUN-TOLMEN (14)	ACEMAC/RUBSPE (17)	ALNRUB/ACECIR/CLASIB (19)	ALNRUB/ELYGLA (9)	ALNRUB/OPLHOR-RUBSPE (11)	ALNRUB/OXAORE (22)	ALNRUB/RUBPAR (1)	ALNRUB/RUBSPE (75)	ALNRUB/STACHA-TOLMEN (30)	POPBAL-ALNRUB/RUBSPE (12)	POPBAL/CORSER/CAROBN (3)	POPBAL-PICSIT-(ACEMAC)/OXAORE (11)	ACEMAC/MAISTE (3)	ALNRUB/ALNVIR (7)
<b>Species (Strata)</b>	<b>Specific Growth Form</b>	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Callitropsis nootkatensis (overstory)	CT	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	67, 0.1	14, 5
Tsuga heterophylla (overstory)	CT	89, 8	33, 11	29, 3	71, 5	21, 4	11, 2	36, 8	50, 7	100, 2	35, 5	7, 1	33, 4	0, 0	18, 3	33, 0.1	0, 0
Pseudotsuga menziesii (overstory)	CT	0, 0	17, 21	43, 13	24, 6	21, 5	0, 0	9, 1	14, 7	100, 3	8, 6	7, 1	17, 8	0, 0	0, 0	33, 2	14, 5
Thuja plicata (overstory)	CT	0, 0	11, 7	14, 4	76, 7	37, 9	0, 0	18, 4	5, 1	0, 0	21, 2	3, 3	42, 4	0, 0	0, 0	33, 5	0, 0
Picea sitchensis (overstory)	CT	100, 21	61, 22	0, 0	12, 14	16, 7	44, 6	36, 2	73, 12	0, 0	42, 5	10, 3	17, 7	67, 14	81, 21	0, 0	0, 0
Thuja plicata (understory)	CT	0, 0	0, 0	7, 3	47, 2	32, 1	0, 0	27, 1	9, 3	100, 1	17, 2	20, 1	50, 2	0, 0	0, 0	67, 0.1	29, 10

Abbrev (Plot Count)		PICSIT-(ALNRUB)/ RUBSPE/POLMUN (9)	ACEMAC/OXAORE (16)	ACEMAC/ POLMUN-TOLMEN (14)	ACEMAC/RUBSPE (17)	ALNRUB/ACECIR/ CLASIB (19)	ALNRUB/ELYGLA (9)	ALNRUB/OPLHOR- RUBSPE (11)	ALNRUB/OXAORE (22)	ALNRUB/RUBPAR (1)	ALNRUB/RUBSPE (75)	ALNRUB/STACHA- TOLMEN (30)	POPBAL- ALNRUB/RUBSPE (12)	POPBAL/CORSER/ CAROBN (3)	POPBAL-PICSIT- (ACEMAC)/OXAORE (11)	ACEMAC/MAIESTE (3)	ALNRUB/ALNVIR (7)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Tsuga heterophylla</i> (understory)	CT	<b>67, 15</b>	17, 4	14, 2	41, 3	26, 1	11, 2	27, 5	36, 5	0, 0	25, 5	20, 1	33, 2	0, 0	<b>9, 10</b>	33, 1	<b>14, 13</b>
<i>Callitropsis nootkatensis</i> (understory)	CT	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	8, 1	0, 0	0, 0	33, 0.1	43, 2
<i>Picea sitchensis</i> (understory)	CT	44, 6	28, 4	0, 0	6, 3	16, 3	44, 5	0, 0	36, 2	0, 0	9, 4	17, 8	17, 4	100, 6	27, 5	0, 0	0, 0
<i>Pseudotsuga menziesii</i> (understory)	CT	0, 0	6, 1	14, 2	12, 1	11, 0.1	0, 0	0, 0	5, 3	0, 0	4, 4	3, 0.1	33, 2	0, 0	0, 0	0, 0	57, 7
<i>Acer macrophyllum</i> (overstory)	BT	<b>11, 25</b>	<b>78, 49</b>	<b>100, 48</b>	<b>100, 36</b>	<b>42, 15</b>	0, 0	9, 7	<b>23, 11</b>	0, 0	15, 6	<b>17, 15</b>	33, 7	33, 3	<b>45, 36</b>	<b>100, 71</b>	0, 0
<i>Populus trichocarpa</i> (overstory)	BT	<b>11, 20</b>	<b>17, 43</b>	21, 9	24, 7	11, 5	44, 0.1	0, 0	0, 0	0, 0	19, 5	7, 3	<b>100, 30</b>	<b>100, 22</b>	<b>45, 25</b>	33, 4	0, 0
<i>Alnus rubra</i> (overstory)	BT	<b>89, 16</b>	55, 9	<b>86, 11</b>	<b>82, 15</b>	<b>100, 46</b>	<b>100, 70</b>	<b>100, 61</b>	<b>100, 63</b>	<b>100, 35</b>	<b>100, 58</b>	<b>87, 54</b>	<b>92, 17</b>	<b>100, 16</b>	<b>36, 19</b>	0, 0	<b>71, 43</b>
<i>Acer macrophyllum</i> (understory)	BT	<b>11, 10</b>	<b>33, 14</b>	64, 4	59, 6	26, 3	11, 2	0, 0	9, 5	0, 0	8, 2	20, 7	0, 0	0, 0	27, 5	<b>100, 10</b>	0, 0
<i>Alnus rubra</i> (understory)	BT	33, 7	22, 5	50, 2	29, 6	47, 5	<b>44, 10</b>	27, 3	32, 7	0, 0	27, 6	<b>53, 15</b>	50, 5	67, 4	9, 5	0, 0	<b>57, 33</b>
<i>Acer circinatum</i>	S	0, 0	<b>83, 31</b>	<b>57, 10</b>	<b>94, 18</b>	<b>95, 28</b>	22, 2	45, 8	<b>50, 13</b>	0, 0	27, 7	20, 2	67, 8	0, 0	<b>82, 17</b>	100, 7	0, 0
<i>Rubus nutkanus</i>	S	0, 0	11, 2	0, 0	35, 2	26, 4	33, 3	18, 2	23, 5	<b>100, 30</b>	29, 2	23, 3	33, 4	0, 0	0, 0	100, 7	0, 0

Abbrev (Plot Count)		PICSIT-(ALNRUB)/ RUBSPE/POLMUN (9)	ACEMAC/OXAORE (16)	ACEMAC/ POLMUN-TOLMEN (14)	ACEMAC/RUBSPE (17)	ALNRUB/ACECIR/ CLASIB (19)	ALNRUB/ELYGLA (9)	ALNRUB/OPLHOR- RUBSPE (11)	ALNRUB/OXAORE (22)	ALNRUB/RUBPAR (1)	ALNRUB/RUBSPE (75)	ALNRUB/STACHA- TOLMEN (30)	POPBAL- ALNRUB/RUBSPE (12)	POPBAL/CORSER/ CAROBN (3)	POPBAL-PICSIT- (ACEMAC)/OXAORE (11)	ACEMAC/MAISTE (3)	ALNRUB/ALNVIR (7)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Sambucus racemosa</i>	S	56, 10	6, 0.1	0, 0	65, 4	37, 6	0, 0	55, 8	32, 3	0, 0	56, 9	10, 6	42, 4	0, 0	18, 4	100, 2	14, 1
<i>Oplopanax horridus</i>	S	0, 0	6, 1	0, 0	41, 2	32, 3	0, 0	100, 32	9, 2	100, 2	23, 2	17, 2	25, 1	0, 0	0, 0	100, 6	14, 1
<i>Ribes lacustre</i>	S	0, 0	0, 0	0, 0	18, 1	26, 11	11, 1	0, 0	5, 2	0, 0	17, 4	30, 2	42, 1	0, 0	0, 0	67, 1	29, 4
<i>Rubus spectabilis</i>	S	100, 38	67, 7	71, 3	100, 28	63, 6	78, 3	91, 26	95, 8	100, 7	97, 40	70, 5	92, 21	100, 1	91, 18	33, 3	29, 9
<i>Ribes bracteosum</i>	S	0, 0	0, 0	14, 2	12, 1	5, 0.1	0, 0	73, 9	9, 0.1	0, 0	47, 8	27, 2	17, 3	0, 0	9, 0.1	33, 5	14, 1
<i>Vaccinium parvifolium</i>	S	11, 5	44, 1	7, 1	29, 1	5, 0.1	0, 0	45, 1	32, 1	0, 0	33, 1	7, 1	0, 0	0, 0	0, 0	0, 0	14, 1
<i>Rubus laciniatus</i>	S	11, 0.1	22, 1	0, 0	6, 1	11, 3	11, 0.1	0, 0	14, 4	0, 0	4, 11	0, 0	8, 0.1	67, 1	9, 2	0, 0	0, 0
<i>Symphoricarpos albus</i>	S	0, 0	6, 2	36, 4	12, 2	11, 1	33, 3	0, 0	9, 1	0, 0	4, 6	0, 0	33, 3	67, 6	45, 6	0, 0	14, 35
<i>Vaccinium ovalifolium</i>	S	0, 0	6, 0.1	7, 2	18, 1	0, 0	0, 0	36, 1	18, 1	100, 5	20, 2	7, 0.1	8, 0.1	0, 0	0, 0	0, 0	0, 0
<i>Vaccinium ovalifolium</i>	S	0, 0	6, 0.1	7, 2	18, 1	0, 0	0, 0	36, 1	18, 1	100, 5	20, 2	7, 0.1	8, 0.1	0, 0	0, 0	0, 0	0, 0
<i>Salix sitchensis</i>	S	0, 0	0, 0	0, 0	6, 0.1	0, 0	22, 15	0, 0	0, 0	100, 15	4, 10	10, 1	8, 1	0, 0	0, 0	0, 0	14, 5
<i>Alnus viridis ssp. sinuata</i>	S	0, 0	0, 0	0, 0	0, 0	5, 8	0, 0	0, 0	0, 0	100, 10	1, 0.1	0, 0	17, 4	0, 0	0, 0	0, 0	100, 31
<i>Rubus ursinus</i>	SS	0, 0	33, 3	50, 3	35, 2	32, 1	100, 10	9, 3	18, 2	0, 0	15, 11	20, 3	17, 15	33, 3	45, 6	0, 0	0, 0

Abbrev (Plot Count)		PICSIT-(ALNRUB)/ RUBSPE/POLMUN (9)	ACEMAC/OXAORE (16)	ACEMAC/ POLMUN-TOLMEN (14)	ACEMAC/RUBSPE (17)	ALNRUB/ACECIR/ CLASIB (19)	ALNRUB/ELYGLA (9)	ALNRUB/OPLHOR- RUBSPE (11)	ALNRUB/OXAORE (22)	ALNRUB/RUBPAR (1)	ALNRUB/RUBSPE (75)	ALNRUB/STACHA- TOLMEN (30)	POPBAL- ALNRUB/RUBSPE (12)	POPBAL/CORSER/ CAROBN (3)	POPBAL-PICSIT- (ACEMAC)/OXAORE (11)	ACEMAC/MAIESTE (3)	ALNRUB/ALNVIR (7)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Polystichum munitum</i>	Fe	89, 38	100, 28	100, 29	76, 13	79, 4	100, 8	73, 2	95, 32	100, 1	77, 13	50, 2	67, 10	100, 2	100, 35	67, 0.1	14, 1
<i>Athyrium filix-femina</i> ssp. <i>cyclosum</i>	Fe	78, 4	61, 2	36, 4	71, 9	89, 9	0, 0	82, 6	77, 2	100, 2	81, 7	67, 6	67, 9	33, 1	45, 3	67, 13	29, 8
<i>Pteridium aquilinum</i> ssp. <i>pubescens</i>	Fe	0, 0	17, 7	7, 3	6, 40	0, 0	0, 0	9, 2	0, 0	0, 0	4, 1	0, 0	0, 0	0, 0	0, 0	67, 2	0, 0
<i>Polypodium glycyrrhiza</i>	Fe	22, 1	39, 1	36, 1	29, 1	5, 1	11, 0.1	18, 0.1	41, 0.1	0, 0	32, 1	3, 1	0, 0	0, 0	45, 0.1	0, 0	0, 0
<i>Struthiopteris spicant</i>	Fe	44, 6	17, 2	0, 0	6, 0.1	16, 1	0, 0	55, 1	41, 1	0, 0	37, 2	3, 0.1	8, 1	0, 0	18, 0.1	0, 0	0, 0
<i>Circaea alpina</i>	F	22, 4	56, 5	64, 11	88, 4	53, 11	22, 4	64, 4	55, 6	0, 0	52, 4	57, 14	33, 8	33, 1	45, 4	100, 1	14, 1
<i>Tellima grandiflora</i>	F	11, 1	11, 1	21, 1	29, 2	16, 2	0, 0	18, 9	9, 20	0, 0	5, 18	0, 0	8, 5	0, 0	0, 0	100, 1	0, 0
<i>Maianthemum stellatum</i>	F	0, 0	0, 0	7, 1	6, 1	37, 2	0, 0	0, 0	0, 0	0, 0	13, 6	7, 0.1	17, 1	0, 0	0, 0	100, 22	0, 0
<i>Maianthemum racemosum</i> ssp. <i>amplexicaule</i>	F	0, 0	0, 0	0, 0	12, 0.1	21, 1	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	100, 1	0, 0
<i>Actaea rubra</i>	F	0, 0	0, 0	0, 0	0, 0	5, 0.1	0, 0	9, 0.1	0, 0	0, 0	0, 0	7, 0.1	17, 0.1	0, 0	0, 0	100, 0.1	0, 0
<i>Galium triflorum</i>	F	11, 1	28, 1	0, 0	24, 0.1	42, 2	22, 1	73, 1	36, 2	0, 0	40, 1	53, 3	25, 1	0, 0	45, 2	67, 1	29, 1
<i>Viola glabella</i>	F	11, 3	22, 1	50, 5	41, 3	47, 4	0, 0	45, 3	32, 2	0, 0	45, 3	30, 3	25, 1	0, 0	9, 0.1	67, 1	43, 3

Abbrev (Plot Count)		PICSIT-(ALNRUB)/RUBSPE/POLMUN (9)	ACEMAC/OXAORE (16)	ACEMAC/POLMUN-TOLMEN (14)	ACEMAC/RUBSPE (17)	ALNRUB/ACECIR/CLASIB (19)	ALNRUB/ELYGLA (9)	ALNRUB/OPHOR-RUBSPE (11)	ALNRUB/OXAORE (22)	ALNRUB/RUBPAR (1)	ALNRUB/RUBSPE (75)	ALNRUB/STACHA-TOLMEN (30)	POPBAL-ALNRUB/RUBSPE (12)	POPBAL/CORSER/CAROBN (3)	POPBAL-PICSIT-(ACEMAC)/OXAORE (11)	ACEMAC/MAIESTE (3)	ALNRUB/ALNVIR (7)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Dicentra formosa ssp. formosa	F	0, 0	6, 1	14, 6	35, 6	37, 5	0, 0	27, 2	9, 1	100, 0.1	19, 4	10, 0.1	25, 0.1	0, 0	0, 0	67, 1	0, 0
Thalictrum occidentale	F	0, 0	0, 0	0, 0	6, 0.1	0, 0	0, 0	0, 0	0, 0	0, 0	1, 0.1	0, 0	0, 0	0, 0	0, 0	67, 2	0, 0
Tolmiea menziesii	F	22, 26	72, 6	79, 14	88, 15	53, 6	56, 9	64, 21	64, 8	100, 4	72, 16	70, 11	42, 6	33, 1	91, 15	33, 1	14, 1
Claytonia sibirica	F	56, 1	67, 2	71, 6	76, 3	84, 10	67, 4	73, 4	73, 5	0, 0	65, 4	80, 7	8, 0.1	33, 1	55, 5	33, 3	0, 0
Mycelis muralis	F	0, 0	33, 2	57, 2	53, 0.1	37, 1	11, 8	0, 0	14, 1	0, 0	24, 1	27, 1	25, 1	33, 1	36, 1	33, 0.1	0, 0
Osmorhiza berteroi	F	0, 0	11, 2	29, 1	0, 0	26, 1	0, 0	45, 1	23, 2	0, 0	16, 2	23, 1	17, 1	0, 0	18, 1	33, 0.1	14, 1
Heracleum maximum	F	0, 0	11, 1	7, 1	0, 0	32, 1	11, 2	36, 1	18, 1	100, 4	13, 4	37, 3	8, 1	0, 0	0, 0	33, 0.1	0, 0
Urtica dioica	F	0, 0	6, 25	57, 2	18, 2	11, 8	0, 0	0, 0	0, 0	0, 0	8, 8	17, 7	17, 4	0, 0	0, 0	33, 0.1	0, 0
Asarum caudatum	F	0, 0	0, 0	0, 0	6, 0.1	37, 1	0, 0	27, 3	5, 1	100, 0.1	4, 1	20, 5	8, 1	0, 0	0, 0	33, 0.1	0, 0
Trillium ovatum	F	0, 0	0, 0	0, 0	0, 0	5, 1	0, 0	45, 0.1	14, 0.1	0, 0	5, 0.1	3, 0.1	0, 0	0, 0	0, 0	33, 0.1	0, 0
Oxalis oregana	F	33, 33	94, 31	0, 0	18, 3	32, 12	56, 4	45, 46	100, 28	0, 0	44, 25	40, 6	17, 4	100, 2	100, 20	0, 0	14, 25
Tiarella trifoliata	F	11, 5	44, 12	14, 2	35, 3	53, 1	0, 0	82, 4	55, 3	0, 0	44, 3	33, 3	25, 1	0, 0	18, 1	0, 0	0, 0
Galium aparine	F	11, 1	39, 2	64, 3	47, 3	21, 2	0, 0	27, 4	32, 2	0, 0	19, 5	10, 2	8, 8	33, 1	9, 1	0, 0	0, 0
Stachys cooleyae	F	22, 4	39, 7	50, 8	18, 1	32, 2	78, 3	45, 3	50, 2	0, 0	45, 5	87, 11	25, 1	33, 1	73, 4	0, 0	14, 6



Abbrev (Plot Count)		PICSIT-(ALNRUB)/ RUBSPE/POLMUN (9)	ACEMAC/OXAORE (16)	ACEMAC/ POLMUN-TOLMEN (14)	ACEMAC/RUBSPE (17)	ALNRUB/ACECIR/ CLASIB (19)	ALNRUB/ELYGLA (9)	ALNRUB/OPLHOR- RUBSPE (11)	ALNRUB/OXAORE (22)	ALNRUB/RUBPAR (1)	ALNRUB/RUBSPE (75)	ALNRUB/STACHA- TOLMEN (30)	POPBAL- ALNRUB/RUBSPE (12)	POPBAL/CORSER/ CAROBN (3)	POPBAL-PICSIT- (ACEMAC)/OXAORE (11)	ACEMAC/MAIESTE (3)	ALNRUB/ALNVIR (7)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Ranunculus repens	F	11, 3	33, 6	21, 1	18, 1	16, 13	78, 16	0, 0	32, 7	0, 0	19, 14	23, 17	17, 20	100, 14	73, 10	0, 0	0, 0
Prunella vulgaris	F	11, 0.1	11, 2	7, 1	0, 0	0, 0	44, 4	0, 0	0, 0	0, 0	11, 1	3, 1	8, 0.1	33, 1	9, 3	0, 0	0, 0
Pectiantia ovalis	F	22, 7	11, 0.1	0, 0	6, 1	0, 0	0, 0	36, 5	41, 4	0, 0	29, 4	10, 2	0, 0	0, 0	45, 4	0, 0	0, 0
Petasites frigidus	F	0, 0	11, 2	0, 0	0, 0	16, 1	11, 0.1	36, 2	14, 1	100, 2	20, 3	53, 19	8, 1	0, 0	0, 0	0, 0	57, 16
Maianthemum dilatatum	F	44, 5	6, 0.1	0, 0	0, 0	16, 2	0, 0	36, 1	18, 4	0, 0	13, 2	3, 1	0, 0	0, 0	0, 0	0, 0	0, 0
Erythranthe guttata	F	0, 0	6, 3	0, 0	0, 0	0, 0	0, 0	0, 0	5, 0.1	100, 0.1	5, 3	17, 1	0, 0	0, 0	9, 3	0, 0	0, 0
Viola spp.	F	0, 0	6, 1	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	100, 0.1	0, 0	7, 1	0, 0	0, 0	0, 0	0, 0	0, 0
Aruncus dioicus	F	0, 0	0, 0	0, 0	6, 8	16, 0.1	0, 0	9, 0.1	0, 0	100, 3	11, 1	17, 7	8, 0.1	0, 0	0, 0	0, 0	14, 2
Streptopus amplexifolius	F	0, 0	0, 0	0, 0	6, 0.1	5, 0.1	0, 0	64, 1	5, 0.1	0, 0	13, 0.1	3, 0.1	17, 1	0, 0	0, 0	0, 0	0, 0
Trautvetteria caroliniensis	F	0, 0	0, 0	0, 0	0, 0	11, 1	0, 0	9, 0.1	9, 2	100, 1	5, 5	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0
Anaphalis margaritacea	F	0, 0	0, 0	0, 0	0, 0	5, 1	11, 3	9, 1	0, 0	0, 0	1, 0.1	13, 0.1	17, 1	0, 0	0, 0	0, 0	57, 1
Valeriana sitchensis	F	0, 0	0, 0	0, 0	0, 0	5, 0.1	0, 0	0, 0	0, 0	100, 1	1, 0.1	3, 1	0, 0	0, 0	0, 0	0, 0	0, 0
Jacobaea vulgaris	F	0, 0	0, 0	0, 0	0, 0	5, 0.1	0, 0	0, 0	0, 0	0, 0	0, 0	3, 0.1	0, 0	67, 1	0, 0	0, 0	0, 0
Cirsium arvense	F	0, 0	0, 0	0, 0	0, 0	0, 0	11, 8	0, 0	0, 0	0, 0	4, 1	7, 2	0, 0	67, 1	0, 0	0, 0	0, 0

Abbrev (Plot Count)		PICSIT-(ALNRUB)/ RUBSPE/POLMUN (9)	ACEMAC/OXAORE (16)	ACEMAC/ POLMUN-TOLMEN (14)	ACEMAC/RUBSPE (17)	ALNRUB/ACECIR/ CLASIB (19)	ALNRUB/ELYGLA (9)	ALNRUB/OPLHOR- RUBSPE (11)	ALNRUB/OXAORE (22)	ALNRUB/RUBPAR (1)	ALNRUB/RUBSPE (75)	ALNRUB/STACHA- TOLMEN (30)	POPBAL- ALNRUB/RUBSPE (12)	POPBAL/CORSER/ CAROBN (3)	POPBAL-PICSIT- (ACEMAC)/OXAORE (11)	ACEMAC/MAIESTE (3)	ALNRUB/ALNVIR (7)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Senecio triangularis	F	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	100, 0.1	4, 0.1	3, 6	0, 0	0, 0	0, 0	0, 0	0, 0
Caltha biflora	F	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	100, 0.1	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0
Veratrum spp.	F	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	100, 2	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0
Rumex crispus	F	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	1, 8	0, 0	8, 0.1	67, 0.1	18, 2	0, 0	0, 0
Unidentified Grass	G	11, 5	<b>22, 17</b>	50, 2	47, 3	42, 5	<b>11, 50</b>	9, 0.1	9, 2	0, 0	11, 7	10, 7	33, 5	0, 0	18, 6	67, 1	0, 0
Elymus glaucus	G	0, 0	28, 6	<b>14, 14</b>	6, 3	11, 3	<b>44, 33</b>	0, 0	<b>14, 14</b>	0, 0	21, 7	23, 3	17, 2	<b>67, 25</b>	27, 5	0, 0	0, 0
Agrostis spp.	G	0, 0	11, 8	14, 4	12, 1	5, 5	<b>44, 36</b>	0, 0	0, 0	0, 0	<b>13, 13</b>	10, 6	0, 0	<b>67, 32</b>	18, 8	0, 0	0, 0
Bromus vulgaris	G	0, 0	6, 3	36, 4	24, 1	21, 3	22, 8	45, 4	23, 5	100, 1	23, 5	20, 8	8, 2	0, 0	27, 3	0, 0	0, 0
Carex leptopoda	Gr	22, 2	56, 4	43, 4	24, 6	16, 1	22, 6	0, 0	45, 4	0, 0	33, 3	10, 7	8, 2	<b>33, 20</b>	55, 3	0, 0	14, 1
Luzula parviflora	Gr	11, 2	33, 2	7, 1	24, 0.1	5, 1	11, 0.1	36, 1	50, 2	0, 0	31, 1	10, 1	0, 0	33, 2	36, 1	0, 0	0, 0
Carex obnupta	Gr	0, 0	6, 8	0, 0	0, 0	<b>5, 20</b>	11, 3	0, 0	5, 3	0, 0	3, 2	3, 0.1	<b>17, 21</b>	<b>100, 20</b>	9, 3	0, 0	0, 0
Undifferentiated Moss	M	<b>33, 11</b>	<b>28, 17</b>	21, 8	<b>53, 12</b>	26, 7	<b>11, 10</b>	9, 1	<b>18, 18</b>	0, 0	19, 8	10, 8	42, 9	<b>67, 12</b>	<b>18, 10</b>	<b>100, 14</b>	0, 0
Plagiomnium insigne	M	11, 1	33, 5	43, 7	18, 2	<b>16, 12</b>	0, 0	9, 1	18, 2	0, 0	9, 4	7, 4	0, 0	33, 1	9, 1	0, 0	0, 0
Rhytidiadelphus triquetrus	M	0, 0	11, 3	43, 5	24, 4	0, 0	0, 0	9, 1	0, 0	0, 0	1, 3	3, 1	0, 0	0, 0	9, 1	0, 0	0, 0

G853 North-Central Pacific Maritime Swamp Forest

**Table A-20.** Synoptic table for G853 North-Central Pacific Maritime Swamp Forest.

Alliance		A3753 <i>Alnus rubra</i> - <i>Fraxinus latifolia</i> / <i>Lysichiton americanus</i> Swamp Woodland Alliance				A4285 <i>Tsuga heterophylla</i> - <i>Picea sitchensis</i> / <i>Lysichiton americanus</i> Swamp Forest Alliance				
Abbrev (Plot Count)		ALNRUB/ ATHFIL- LYSAME (28)	ALNRUB/ GLYSTR (10)	ALNRUB/ RUBSPE/ CAROBN- LYSAME (8)	ALNRUB/ RUBSPE/ CHRGLE (11)	PICSIT/ RUBSPE/ CAROBN- LYSAME (39)	PICSIT- TSUHET- (ALNRUB)/ OPLHOR/ POLMUN (5)	TSUHET- (PSEMEN)/ OPLHOR/ POLMUN (15)	TSUHET- (THUPLI- ALNRUB)/ LYSAME- ATHFIL (18)	TSUHET- THUPLI/ VACOVAL- GAUSHA/ LYSAME (50)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Thuja plicata</i> (overstory)	CT	42, 6	<b>10, 15</b>	12, 2	9, 3	<b>39, 11</b>	0, 0	<b>47, 18</b>	<b>77, 17</b>	<b>90, 26</b>
<i>Tsuga heterophylla</i> (overstory)	CT	28, 5	20, 2	37, 8	100, 8	<b>82, 16</b>	<b>100, 44</b>	<b>100, 47</b>	<b>89, 19</b>	<b>98, 25</b>
<i>Picea sitchensis</i> (overstory)	CT	21, 8	0, 0	88, 6	<b>82, 12</b>	<b>100, 26</b>	0, 0	0, 0	0, 0	68, 9
<i>Tsuga heterophylla</i> (understory)	CT	18, 4	30, 2	12, 2	0, 0	13, 9	0, 0	20, 5	44, 6	<b>18, 14</b>
<i>Alnus rubra</i> (overstory)	BT	<b>93, 52</b>	<b>100, 49</b>	<b>38, 73</b>	<b>100, 71</b>	<b>79, 24</b>	<b>80, 31</b>	47, 8	<b>34, 23</b>	20, 6
<i>Alnus rubra</i> (understory)	BT	<b>32, 10</b>	60, 7	12, 2	0, 0	3, 5	0, 0	0, 0	22, 2	4, 4
<i>Rubus spectabilis</i>	S	71, 7	70, 5	<b>100, 32</b>	<b>100, 39</b>	<b>95, 15</b>	<b>100, 13</b>	100, 5	61, 7	44, 8
<i>Malus fusca</i>	S	29, 5	20, 3	0, 0	0, 0	<b>38, 13</b>	0, 0	0, 0	<b>17, 19</b>	<b>56, 10</b>
<i>Acer circinatum</i>	S	<b>25, 12</b>	20, 4	<b>50, 10</b>	<b>9, 13</b>	<b>10, 25</b>	<b>40, 35</b>	13, 8	28, 8	8, 6
<i>Frangula purshiana</i> ssp. <i>purshiana</i>	S	25, 3	20, 1	12, 0.1	0, 0	41, 8	20, 0.1	7, 0.1	6, 2	54, 5
<i>Vaccinium parvifolium</i>	S	21, 2	20, 1	25, 0.1	64, 1	59, 3	100, 2	80, 3	33, 1	56, 3
<i>Vaccinium ovalifolium</i>	S	14, 2	20, 1	0, 0	82, 1	33, 4	100, 2	73, 3	44, 7	<b>28, 11</b>
<i>Vaccinium ovalifolium</i>	S	14, 2	20, 1	0, 0	82, 1	33, 4	100, 2	73, 3	44, 7	<b>28, 11</b>
<i>Gaultheria shallon</i>	S	<b>14, 10</b>	10, 1	0, 0	27, 0.1	<b>64, 16</b>	60, 0.1	53, 2	<b>22, 15</b>	<b>100, 30</b>
<i>Rhododendron menziesii</i>	S	14, 4	0, 0	12, 2	27, 0.1	64, 2	100, 2	67, 3	28, 1	70, 4

Abbrev (Plot Count)		ALNRUB/ ATHFIL- LYSAME (28)	ALNRUB/ GLYSTR (10)	ALNRUB/ RUBSPE/ CAROBN- LYSAME (8)	ALNRUB/ RUBSPE/ CHRGLE (11)	PICSIT/ RUBSPE/ CAROBN- LYSAME (39)	PICSIT- TSUHET- (ALNRUB)/ OPLHOR/ POLMUN (5)	TSUHET- (PSEMEN)/ OPLHOR/ POLMUN (15)	TSUHET- (THUPLI- ALNRUB)/ LYSAME- ATHFIL (18)	TSUHET- THUPLI/ VACOVAL- GAUSHA/ LYSAME (50)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Oplopanax horridus</i>	S	14, 8	0, 0	12, 3	27, 6	8, 3	<b>100, 31</b>	<b>100, 30</b>	22, 2	6, 1
<i>Sambucus racemosa</i>	S	11, 0.1	0, 0	38, 4	45, 3	26, 3	60, 1	33, 2	0, 0	2, 5
<i>Ribes bracteosum</i>	S	11, 1	0, 0	<b>12, 13</b>	<b>82, 13</b>	10, 3	<b>80, 11</b>	53, 3	6, 2	2, 2
<i>Vaccinium ovatum</i>	S	0, 0	0, 0	0, 0	0, 0	13, 2	0, 0	0, 0	0, 0	<b>40, 27</b>
<i>Athyrium filix-femina</i> ssp. <i>cyclosorum</i>	Fe	<b>93, 12</b>	<b>90, 10</b>	75, 3	100, 4	82, 4	100, 4	87, 8	89, 7	24, 2
<i>Struthiopteris spicant</i>	Fe	32, 4	20, 1	12, 0.1	91, 2	62, 3	100, 4	80, 8	39, 5	<b>88, 9</b>
<i>Polystichum munitum</i>	Fe	7, 1	20, 1	75, 6	100, 4	31, 6	<b>100, 28</b>	<b>87, 16</b>	<b>17, 24</b>	8, 2
<i>Dryopteris expansa</i>	Fe	7, 1	10, 1	12, 0.1	55, 0.1	21, 1	80, 0.1	53, 1	0, 0	2, 2
<i>Gymnocarpium dryopteris</i>	Fe	7, 1	10, 1	0, 0	0, 0	3, 8	40, 2	33, 3	<b>17, 13</b>	2, 1
<i>Polypodium glycyrrhiza</i>	Fe	4, 1	0, 0	38, 0.1	73, 0.1	10, 0.1	80, 1	20, 0.1	0, 0	2, 1
<i>Equisetum telmateia</i> ssp. <i>braunii</i>	Fe ally	18, 2	10, 4	0, 0	55, 1	3, 2	0, 0	13, 2	11, 1	2, 0.1
<i>Lysichiton americanus</i>	Fe	<b>93, 39</b>	80, 4	<b>38, 28</b>	73, 4	<b>92, 25</b>	40, 2	20, 7	<b>94, 28</b>	<b>90, 15</b>
<i>Maianthemum dilatatum</i>	F	46, 3	30, 1	12, 0.1	55, 0.1	44, 3	80, 3	47, 2	44, 2	36, 3
<i>Oenanthe sarmentosa</i>	F	<b>43, 10</b>	<b>30, 12</b>	<b>50, 14</b>	<b>91, 13</b>	<b>54, 10</b>	20, 3	13, 0.1	11, 3	10, 7
<i>Stachys cooleyae</i>	F	39, 4	50, 5	62, 4	64, 3	13, 2	60, 2	27, 2	33, 6	0, 0
<i>Veronica americana</i>	F	36, 2	70, 2	12, 0.1	18, 0.1	8, 2	0, 0	13, 2	11, 2	0, 0
<i>Viola palustris</i>	F	32, 5	40, 2	12, 0.1	0, 0	<b>3, 18</b>	0, 0	0, 0	22, 1	6, 1
<i>Tiarella trifoliata</i>	F	29, 3	40, 4	12, 0.1	82, 2	23, 5	<b>100, 10</b>	<b>93, 7</b>	44, 3	8, 5
<i>Viola glabella</i>	F	29, 3	30, 3	25, 2	91, 3	15, 4	60, 2	27, 4	17, 7	0, 0
<i>Galium triflorum</i>	F	29, 1	30, 1	0, 0	73, 3	18, 2	100, 2	67, 4	28, 1	0, 0
<i>Tolmiea menziesii</i>	F	25, 6	30, 2	<b>62, 23</b>	<b>100, 21</b>	18, 6	80, 6	<b>40, 10</b>	6, 0.1	0, 0
<i>Circaea alpina</i>	F	21, 1	10, 1	25, 3	73, 3	5, 7	80, 3	40, 3	11, 1	0, 0

Abbrev (Plot Count)		ALNRUB/ ATHFIL- LYSAME (28)	ALNRUB/ GLYSTR (10)	ALNRUB/ RUBSPE/ CAROBN- LYSAME (8)	ALNRUB/ RUBSPE/ CHRGLE (11)	PICSIT/ RUBSPE/ CAROBN- LYSAME (39)	PICSIT- TSUHET- (ALNRUB)/ OPLHOR/ POLMUN (5)	TSUHET- (PSEMEN)/ OPLHOR/ POLMUN (15)	TSUHET- (THUPLI- ALNRUB)/ LYSAME- ATHFIL (18)	TSUHET- THUPLI/ VACOVAL- GAUSHA/ LYSAME (50)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Cornus (canadensis, unalaschkensis)	F	18, 2	10, 1	0, 0	0, 0	15, 1	0, 0	13, 1	33, 1	56, 4
Claytonia sibirica	F	11, 1	30, 2	25, 3	100, 4	23, 3	60, 5	33, 1	22, 1	0, 0
Streptopus amplexifolius	F	11, 1	10, 1	12, 0.1	18, 0.1	10, 0.1	60, 1	67, 1	28, 2	2, 1
Oxalis oregana	F	7, 8	0, 0	50, 7	100, 17	21, 25	80, 38	53, 38	11, 32	2, 20
Rubus pedatus	F	4, 3	10, 1	0, 0	27, 1	5, 0.1	40, 2	20, 2	28, 2	10, 7
Cardamine angulata	F	4, 1	0, 0	25, 2	100, 3	15, 3	60, 1	20, 1	0, 0	0, 0
Boykinia occidentalis	F	4, 1	0, 0	12, 0.1	55, 1	3, 0.1	40, 10	27, 4	0, 0	0, 0
Mitellastra caulescens	F	4, 1	0, 0	0, 0	45, 0.1	0, 0	40, 4	13, 0.1	0, 0	0, 0
Ranunculus repens	F	0, 0	10, 1	50, 18	18, 0.1	3, 4	0, 0	0, 0	0, 0	0, 0
Chrysosplenium glechomaefolium	F	0, 0	0, 0	25, 15	100, 32	18, 18	20, 0.1	7, 0.1	0, 0	0, 0
Pectiantia ovalis	F	0, 0	0, 0	25, 0.1	91, 7	13, 9	100, 4	40, 5	0, 0	0, 0
Erythranthe dentata	F	0, 0	0, 0	25, 4	82, 4	10, 2	40, 3	7, 3	0, 0	0, 0
Trillium ovatum	F	0, 0	0, 0	0, 0	27, 0.1	3, 0.1	80, 0.1	60, 1	6, 1	2, 0.1
Corydalis scouleri	F	0, 0	0, 0	0, 0	27, 1	3, 0.1	60, 3	33, 4	0, 0	0, 0
Prosartes smithii	F	0, 0	0, 0	0, 0	0, 0	0, 0	60, 1	40, 0.1	0, 0	0, 0
Glyceria elata	G	25, 3	70, 24	0, 0	27, 2	10, 7	0, 0	13, 3	17, 9	0, 0
Bromus vulgaris	G	4, 10	0, 0	12, 0.1	36, 1	0, 0	60, 1	13, 14	0, 0	0, 0
Festuca Sulata	G	0, 0	0, 0	12, 0.1	36, 6	8, 2	60, 4	27, 4	0, 0	0, 0
Trisetum cernuum	G	0, 0	0, 0	0, 0	64, 1	5, 3	80, 2	20, 1	0, 0	0, 0
Melica Sulata	G	0, 0	0, 0	0, 0	9, 0.1	0, 0	60, 2	20, 2	0, 0	0, 0
Scirpus microcarpus	Gr	43, 16	40, 13	0, 0	18, 6	5, 10	0, 0	7, 40	22, 3	6, 3
Carex obnupta	Gr	25, 19	0, 0	88, 35	0, 0	67, 37	0, 0	0, 0	0, 0	38, 17

<b>Abbrev (Plot Count)</b>		ALNRUB/ ATHFIL- LYSAME (28)	ALNRUB/ GLYSTR (10)	ALNRUB/ RUBSPE/ CAROBN- LYSAME (8)	ALNRUB/ RUBSPE/ CHRGLE (11)	PICSIT/ RUBSPE/ CAROBN- LYSAME (39)	PICSIT- TSUHET- (ALNRUB)/ OPLHOR/ POLMUN (5)	TSUHET- (PSEMEN)/ OPLHOR/ POLMUN (15)	TSUHET- (THUPLI- ALNRUB)/ LYSAME- ATHFIL (18)	TSUHET- THUPLI/ VACOVAL- GAUSHA/ LYSAME (50)
<b>Species (Strata)</b>	<b>Specific Growth Form</b>	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Carex leptopoda	Gr	7, 2	20, 4	38, 0.1	55, 1	0, 0	20, 0.1	33, 7	6, 2	2, 0.1
Luzula parviflora	Gr	4, 1	10, 1	0, 0	91, 1	21, 1	100, 2	53, 2	17, 1	2, 1
Sphagnum spp.	M	7, 1	0, 0	0, 0	0, 0	10, 1	0, 0	0, 0	11, 4	62, 7

**2.B.2.Na Western North American Grassland & Shrubland**

**M048 Central Rocky Mountain Montane-Foothill Grassland & Shrubland**

G305 Central Rocky Mountain-North Pacific High Montane Mesic Shrubland

**Table A-21.** Synoptic table for G305 Central Rocky Mountain-North Pacific High Montane Mesic Shrubland.

<b>Alliance</b>		A3968 <i>Abies lasiocarpa</i> - <i>Populus tremuloides</i> / <i>Acer glabrum</i> Central Rocky Mountain Avalanche Chute Shrubland			A3969 <i>Vaccinium membranaceum</i> - <i>Vaccinium myrtillus</i> - <i>Vaccinium scoparium</i> Montane-Subalpine Shrubland				A4387 <i>Arctostaphylos</i> ( <i>nevadensis</i> , <i>uva-ursi</i> ) Dwarf-Shrubland & Montane Bald		A4388 <i>Juniperus communis</i> - <i>Paxistima Myrsinites</i> Dwarf-Shrubland	
<b>Abbrev (Plot Count)</b>		POPTRE-PAXMYR (7)	RUBPAR/CHAANG-HERMAX (23)	SYMALB-HOLDIS (7)	SORSIT/VACDEL-(PHYEMP) (23)	SPISPL/CARSPE-(POLBIS) (11)	VAC(DEL,SCO)/FESVIR (14)	VACMEM-(SORSIT)/(CALRUB) (45)	VACMEM/XERTEN (16)	ARC(NEV,UVA)-PAXMYR/PSESPI (27)	JUNCOM-PHLDIF (20)	PAXMYR/P HLDIF (25)
<b>Species (Strata)</b>	<b>Specific Growth Form</b>	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Pseudotsuga menziesii</i> (overstory)	CT	29, 5	9, 3	71, 4	–	–	–	11, 3	6, 2	37, 2	15, 5	4, 1
<i>Tsuga mertensiana</i> (overstory)	CT	–	4, 3	–	43, 3	9, 5	–	7, 2	12, 2	–	–	8, 1
<i>Abies lasiocarpa</i> ssp. <i>lasiocarpa</i> (overstory)	CT	29, 0.1	9, 0.1	29, 2	26, 1	27, 2	14, 5	38, 3	44, 3	7, 2	10, 2	36, 4
<i>Tsuga mertensiana</i> (understory)	CT	–	–	–	61, 4	–	–	13, 1	31, 1	–	5, 0.1	–
<i>Callitropsis nootkatensis</i> (understory)	CT	14, 0.1	13, 0.1	–	48, 1	36, 3	–	22, 2	38, 1	–	–	–
<i>Abies lasiocarpa</i> ssp. <i>lasiocarpa</i> (understory)	CT	14, 2	13, 1	14, 0.1	39, 2	36, 3	71, 2	82, 3	81, 2	22, 1	25, 1	60, 2

Abbrev (Plot Count)		POPTRE-PAXMYR (7)	RUBPAR/CHAANG-HERMAX (23)	SYMALB-HOLDIS (7)	SORSIT/VACDEL-(PHYEMP) (23)	SPISPL/CARSPE-(POLBIS) (11)	VAC(DEL,SCO)/FESVIR (14)	VACMEM-(SORSIT)/(CALRUB) (45)	VACMEM/XERTEN (16)	ARC(NEV,UVA)-PAXMYR/PSESPI (27)	JUNCOM-PHLDIF (20)	PAXMYR/P HLDIF (25)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Pseudotsuga menziesii (understory)	CT	29, 0.1	4, 1	14, 0.1	–	–	–	24, 1	44, 5	70, 1	–	12, 0.1
Pinus ponderosa (understory)	CT	–	–	–	–	–	–	–	–	63, 0.1	–	–
Populus tremuloides (understory)	BT	100, 31	4, 2	–	–	–	–	–	–	4, 2	–	–
Paxistima myrsinites	S	100, 8	22, 3	–	4, 0.1	–	43, 1	49, 12	50, 2	81, 6	20, 4	100, 17
Amelanchier alnifolia	S	57, 7	17, 1	57, 8	–	–	–	9, 9	6, 1	63, 1	20, 2	4, 0.1
Acer circinatum	S	43, 9	26, 2	–	–	–	–	–	6, 3	–	–	–
Rubus leucodermis	S	43, 2	4, 3	–	–	–	–	–	–	7, 1	–	–
Rubus nutkanus	S	14, 0.1	96, 39	43, 3	–	–	–	11, 6	6, 1	–	5, 7	8, 1
Holodiscus discolor	S	–	4, 0.1	100, 10	–	–	–	–	–	19, 1	5, 3	–
Symphoricarpos albus	S	29, 3	13, 1	100, 42	–	–	–	–	–	4, 0.1	–	–
Rosa nutkana	S	–	4, 3	71, 6	–	–	–	2, 0.1	–	–	25, 1	–
Acer glabrum var. douglasii	S	14, 0.1	39, 3	43, 3	–	–	–	2, 2	–	–	–	–
Mahonia aquifolium	S	–	4, 0.1	43, 8	–	–	–	–	–	–	–	–
Sorbus sitchensis	S	–	4, 0.1	–	100, 19	73, 5	29, 1	42, 15	56, 2	4, 0.1	–	16, 1
Vaccinium membranaceum	S	14, 0.1	–	–	74, 7	64, 4	–	98, 36	81, 28	19, 1	30, 4	48, 7
Spiraea splendens	S	–	–	–	52, 4	100, 40	21, 10	40, 12	25, 12	–	–	4, 25
Ceanothus velutinus	S	–	9, 1	–	–	–	–	–	–	48, 2	–	4, 0.1



Abbrev (Plot Count)		POPTRE-PAXMYR (7)	RUBPAR/CHAANG-HERMAX (23)	SYMALB-HOLDIS (7)	SORSIT/VACDEL-(PHYEMP) (23)	SPISPL/CARSPE-(POLBIS) (11)	VAC(DEL,SCO)/FESVIR (14)	VACMEM-(SORSIT)/(CALRUB) (45)	VACMEM/XERTEN (16)	ARC(NEV,UVA)-PAXMYR/PSESPI (27)	JUNCOM-PHLDIF (20)	PAXMYR/P HLDIF (25)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Vaccinium deliciosum	SS	–	4, 0.1	–	<b>100, 32</b>	<b>36, 14</b>	86, 28	27, 7	<b>50, 20</b>	–	<b>5, 20</b>	40, 7
Phyllodoce empetriformis	SS	–	–	–	<b>65, 19</b>	9, 1	36, 5	9, 1	44, 5	–	5, 2	20, 2
Arctostaphylos nevadensis ssp. nevadensis	SS	–	–	–	–	–	–	4, 1	<b>6, 13</b>	<b>96, 23</b>	–	8, 7
Juniperus communis	SS	–	–	14, 1	4, 1	–	14, 3	<b>20, 11</b>	38, 2	7, 0.1	<b>100, 56</b>	28, 1
Cryptogramma acrostichoides	Fe	43, 0.1	4, 0.1	–	9, 0.1	9, 0.1	7, 0.1	9, 0.1	6, 1	48, 0.1	–	40, 1
Pteridium aquilinum	Fe	<b>29, 10</b>	<b>87, 28</b>	–	4, 3	–	–	9, 3	<b>31, 13</b>	–	–	–
Chamaenerion angustifolium	Fe	29, 2	<b>70, 10</b>	29, 1	57, 1	45, 1	50, 2	<b>62, 2</b>	38, 1	22, 1	15, 4	28, 3
Hydrophyllum fendleri	F	–	65, 6	–	4, 0.1	–	–	2, 0.1	–	–	5, 0.1	8, 2
Achillea millefolium	F	–	13, 1	<b>100, 7</b>	4, 1	9, 1	29, 1	44, 1	19, 1	56, 1	95, 2	64, 1
Heracleum maximum	F	–	<b>57, 13</b>	<b>100, 4</b>	–	9, 1	–	4, 0.1	–	–	–	–
Artemisia ludoviciana	F	14, 0.1	13, 0.1	57, 4	–	–	–	11, 3	–	–	5, 3	8, 3
Cerastium arvense	F	–	4, 1	43, 7	–	–	–	–	–	–	35, 4	4, 1
Thalictrum occidentale	F	14, 2	<b>57, 12</b>	57, 3	17, 3	–	7, 0.1	22, 3	–	–	5, 0.1	12, 1
Valeriana sitchensis	F	–	9, 3	–	87, 8	82, 7	64, 3	53, 4	31, 2	–	15, 1	12, 2
Bistorta bistortoides	F	–	4, 1	–	74, 3	82, 8	7, 2	27, 2	6, 1	–	55, 2	12, 0.1
Veratrum viride	F	–	17, 3	–	83, 3	73, 4	14, 1	36, 2	31, 1	–	–	–

Abbrev (Plot Count)		POPTRE-PAXMYR (7)	RUBPAR/CHAANG-HERMAX (23)	SYMALB-HOLDIS (7)	SORSIT/VACDEL-(PHYEMP) (23)	SPISPL/CARSPE-(POLBIS) (11)	VAC(DEL,SCO)/FESVIR (14)	VACMEM-(SORSIT)/(CALRUB) (45)	VACMEM/XERTEN (16)	ARC(NEV,UVA)-PAXMYR/PSESPI (27)	JUNCOM-PHLDIF (20)	PAXMYR/P HLDIF (25)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Lupinus latifolius	F	–	–	–	74, 4	55, 5	100, 6	80, 3	81, 7	15, 0.1	45, 4	60, 2
Arnica latifolia	F	–	–	–	74, 2	18, 1	36, 3	29, 2	6, 1	–	5, 1	16, 1
Erigeron glacialis var. glacialis	F	–	–	–	35, 1	55, 3	86, 5	7, 1	–	–	5, 3	32, 2
Eremogone capillaris var. americana	F	–	–	–	9, 0.1	–	71, 4	20, 3	–	41, 1	20, 4	64, 4
Senecio integerrimus	F	–	–	–	–	–	79, 2	11, 1	–	19, 2	10, 2	48, 1
Erythronium grandiflorum	F	–	9, 1	–	17, 3	9, 0.1	64, 3	13, 0.1	–	7, 1	5, 0.1	24, 7
Phlox diffusa	F	–	4, 0.1	–	17, 1	9, 1	57, 12	42, 4	38, 3	26, 1	85, 8	100, 12
Veronica cusickii	F	–	–	–	4, 0.1	–	43, 2	–	–	–	15, 0.1	16, 1
Hieracium albiflorum	F	14, 0.1	–	–	9, 0.1	18, 0.1	14, 1	51, 1	44, 1	–	10, 1	20, 1
Xerophyllum tenax	F	–	–	–	13, 1	18, 1	7, 7	20, 5	100, 31	–	25, 2	–
Anaphalis margaritacea	F	–	17, 1	–	13, 0.1	36, 1	14, 0.1	38, 3	44, 1	4, 0.1	10, 0.1	–
Fragaria virginiana	F	–	4, 0.1	14, 8	–	–	–	16, 2	44, 3	7, 1	10, 3	4, 0.1
Rubus lasiococcus	F	–	4, 5	–	22, 1	9, 5	–	20, 4	44, 3	–	–	4, 0.1
Silene parryi	F	–	–	–	–	–	7, 0.1	31, 1	–	4, 0.1	40, 1	52, 1
Eriophyllum lanatum	F	–	–	–	–	9, 0.1	–	11, 0.1	–	–	45, 3	–
Gentiana calycosa	F	–	–	–	–	9, 5	–	24, 0.1	–	–	50, 3	12, 0.1
Lomatium martindalei	F	–	–	–	4, 1	9, 0.1	–	18, 1	6, 1	4, 0.1	45, 3	24, 1
Castilleja miniata	F	–	9, 2	14, 3	22, 0.1	18, 0.1	36, 0.1	29, 1	25, 1	15, 0.1	15, 1	76, 1
Lomatium brandegeei	F	–	–	–	–	–	29, 4	13, 1	–	22, 3	–	56, 3

Abbrev (Plot Count)		POPTRE- PAXMYR (7)	RUBPAR/ CHAANG- HERMAX (23)	SYMALB- HOLDIS (7)	SORSIT/ VACDEL- (PHYEMP) (23)	SPISPL/ CARSPE- (POLBIS) (11)	VAC(DEL, SCO)/ FESVIR (14)	VACMEM- (SORSIT)/ (CALRUB) (45)	VACMEM/ XERTEN (16)	ARC(NEV, UVA)- PAXMYR/ PSESPI (27)	JUNCOM- PHLDIF (20)	PAXMYR/P HLDIF (25)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Penstemon procerus	F	–	–	–	–	–	21, 4	22, 1	–	11, 2	10, 1	44, 2
Sedum lanceolatum	F	–	–	–	–	–	14, 0.1	7, 0.1	–	11, 1	10, 2	44, 0.1
Hieracium scouleri	F	–	–	–	–	–	–	7, 1	–	56, 1	25, 2	32, 2
Lewisia columbiana	F	–	4, 1	–	–	9, 0.1	7, 2	–	–	41, 3	–	28, 3
Urtica dioica	F	–	43, 9	29, 7	–	–	–	–	–	–	–	–
Elymus glaucus	G	14, 1	35, 3	43, 5	–	–	–	18, 1	25, 7	4, 0.1	10, 2	–
Vahlodea atropurpurea	G	–	–	–	52, 0.1	9, 0.1	–	2, 2	6, 1	–	–	–
Festuca viridula	G	–	–	–	9, 3	–	100, 16	27, 4	19, 4	19, 2	–	64, 7
Calamagrostis rubescens	G	14, 1	4, 0.1	–	–	–	–	13, 11	–	70, 9	–	4, 2
Pseudoroegneria spicata	G	–	–	–	–	–	–	–	–	63, 12	5, 3	–
Carex phaeocephala	Gr	–	–	43, 7	–	9, 10	–	4, 2	–	–	–	4, 0.1
Carex spectabilis	Gr	–	–	–	57, 7	73, 25	14, 2	16, 3	–	–	20, 5	–
Juncus parryi	Gr	–	–	–	26, 0.1	18, 7	57, 5	18, 1	25, 9	19, 2	5, 1	56, 7
Luzula hitchcockii	Gr	–	–	–	17, 1	–	50, 2	22, 2	6, 3	–	5, 0.1	16, 1
Undifferentiated Moss	M	71, 12	–	14, 5	48, 5	9, 3	7, 5	9, 3	6, 2	56, 12	55, 12	16, 8

G273 Central Rocky Mountain Lower Montane, Foothill & Valley Grassland

**Table A-22.** Synoptic table for A3987 *Festuca idahoensis* - *Pseudoroegneria spicata* - *Poa secunda* Dry Grassland Alliance.

Association (Plot Count)		PSESPI- (CALRUB)/(RACCAN) (6)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover
<i>Pseudotsuga menziesii</i> (overstory)	CT	83, 1
<i>Pinus ponderosa</i> (overstory)	CT	50, 3
<i>Pseudotsuga menziesii</i> (understory)	CT	83, 3
<i>Mahonia aquifolium</i>	S	67, 1
<i>Holodiscus discolor</i>	S	83, 1
<i>Amelanchier alnifolia</i>	S	83, 2
<i>Paxistima myrsinites</i>	S	50, 1
<i>Philadelphus lewisii</i>	S	50, 3
<i>Arctostaphylos uva-ursi</i>	SS	50, 4
<i>Aspidotis densa</i>	Fe	50, 2
<i>Achillea millefolium</i>	F	100, 2
<i>Fragaria virginiana</i>	F	67, 0.1
<i>Eriophyllum lanatum</i>	F	67, 2
<i>Toxicoscordion venenosum</i>	F	67, 5
<i>Fritillaria affinis</i>	F	83, 0.1
<i>Lomatium nudicaule</i>	F	83, 2
<i>Castilleja miniata</i>	F	50, 0.1
Unidentified <i>Allium</i>	F	50, 0.1
<i>Cerastium arvense</i>	F	50, 1
<i>Pseudoroegneria spicata</i>	G	100, 24
<i>Calamagrostis rubescens</i>	G	50, 4
<i>Koeleria macrantha</i>	G	50, 9
Undifferentiated Moss	M	83, 26

**M050 Southern Vancouverian Lowland Grassland & Shrubland**

G488 Southern Vancouverian Shrub & Herbaceous Bald, Bluff & Prairie

**Table A-23.** Synoptic table for G488 Southern Vancouverian Shrub & Herbaceous Bald, Bluff & Prairie.

<b>Alliance</b>		A3739 Festuca rubra - Calamagrostis nutkaensis Exposed Coastal Headland Grassland	A4210 Festuca roemerii - Danthonia californica Interior Prairie, Bald & Bluff Grassland			A4385 Arctostaphylos uva-ursi Dwarf-Shrubland & Bald	A4386 Arctostaphylos columbiana Shrubland	
<b>Abbrev (Plot Count)</b>		CALNUT-ELYGLA (6)	DANINT-RACCAN (2)	FESROE-CERARV-KOEMAC (21)	KOEMAC-(AGRPAL-RACCAN) (18)	ARCUVA-FRAVIR-(FESROE) (13)	RACCAN-(PENDAV) (8)	ARCCOL (11)
<b>Species (Strata)</b>	<b>Specific Growth Form</b>	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Pseudotsuga menziesii (overstory)	CT	–	–	–	6, 2	8, 2	75, 1	18, 4
Pinus contorta (understory)	CT	–	100, 6	–	6, 0.1	8, 7	25, 0.1	–
Pseudotsuga menziesii (understory)	CT	–	–	5, 1	6, 1	15, 2	50, 2	18, 1
Picea sitchensis (unknown)	CT	67, 2	–	5, 3	–	–	–	–
Pseudotsuga menziesii (unknown)	CT	–	–	48, 1	6, 0.1	15, 0.1	–	36, 0.1
Gaultheria shallon	S	83, 9	–	5, 0.1	–	–	–	9, 1
Rubus spectabilis	S	83, 4	–	–	–	–	–	–
Lonicera involucrata	S	50, 4	–	–	–	–	–	–
Morella californica	S	50, 0.1	–	–	–	–	–	–
Mahonia aquifolium	S	–	–	67, 4	33, 7	23, 3	–	27, 1
Holodiscus discolor	S	–	–	24, 4	50, 2	38, 3	25, 0.1	73, 4
Amelanchier alnifolia	S	–	–	14, 0.1	28, 1	69, 2	75, 1	82, 2

Abbrev (Plot Count)		CALNUT-ELYGLA (6)	DANINT-RACCAN (2)	FESROE-CERARV-KOEMAC (21)	KOEMAC-(AGRPAL-RACCAN) (18)	ARCUVA-FRAVIR-(FESROE) (13)	RACCAN-(PENDAV) (8)	ARCCOL (11)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Spiraea lucida</i>	S	–	–	–	17, 3	54, 2	38, 1	18, 2
<i>Paxistima myrsinites</i>	S	–	–	–	–	23, 1	62, 1	36, 2
<i>Arctostaphylos columbiana</i>	S	–	–	5, 0.1	–	8, 3	–	100, 58
<i>Rosa gymnocarpa</i>	S	–	–	14, 1	11, 2	15, 0.1	–	73, 2
<i>Arctostaphylos uva-ursi</i>	SS	–	100, 3	14, 9	11, 2	100, 50	88, 3	55, 13
<i>Symphoricarpos mollis</i> var. <i>hesperius</i>	SS	–	–	–	11, 2	8, 0.1	–	73, 11
<i>Lonicera ciliosa</i>	SS	–	–	5, 0.1	–	–	12, 0.1	45, 1
<i>Polystichum munitum</i>	Fe	83, 4	–	–	6, 0.1	–	–	–
<i>Cryptogramma acrostichoides</i>	Fe	–	50, 1	5, 0.1	33, 3	38, 0.1	75, 1	9, 1
<i>Myriopteris gracillima</i>	Fe	–	50, 1	–	–	–	25, 0.1	–
<i>Equisetum telmateia</i>	Fe ally	83, 20	–	–	–	–	–	–
<i>Selaginella wallacei</i>	Fe ally	–	100, 3	81, 7	61, 15	46, 1	50, 8	27, 3
<i>Anaphalis margaritacea</i>	F	100, 3	–	–	6, 8	–	–	–
<i>Vicia nigricans</i> var. <i>gigantea</i>	F	100, 26	–	–	–	–	–	–
<i>Achillea millefolium</i>	F	67, 3	50, 20	90, 7	89, 5	100, 3	62, 1	91, 2
<i>Epilobium ciliatum</i>	F	83, 2	–	–	–	–	–	–
<i>Fragaria chiloensis</i>	F	67, 5	–	–	–	–	–	–
<i>Galium aparine</i>	F	67, 8	–	29, 1	17, 6	8, 0.1	–	9, 0.1
<i>Solidago lepida</i>	F	67, 5	–	–	–	–	–	–
<i>Stellaria crispa</i>	F	67, 1	–	–	–	–	–	–
<i>Cirsium vulgare</i>	F	50, 0.1	–	–	–	–	–	–
<i>Hypochaeris radicata</i>	F	50, 7	–	38, 9	–	8, 0.1	–	18, 0.1
<i>Maianthemum dilatatum</i>	F	50, 6	–	–	–	–	–	–

Abbrev (Plot Count)		CALNUT-ELYGLA (6)	DANINT-RACCAN (2)	FESROE-CERARV-KOEMAC (21)	KOEMAC-(AGRPAL-RACCAN) (18)	ARCUVA-FRAVIR-(FESROE) (13)	RACCAN-(PENDAV) (8)	ARCCOL (11)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Petasites frigidus</i>	F	50, 2	–	–	–	–	–	–
<i>Sagina procumbens</i>	F	50, 1	–	–	–	–	–	–
<i>Stellaria calycantha</i>	F	50, 1	–	–	–	–	–	–
<i>Micranthes ferruginea</i>	F	–	100, 1	–	–	–	12, 0.1	–
<i>Toxicoscordion venenosum</i>	F	–	50, 3	52, 5	50, 11	69, 1	–	36, 2
<i>Apocynum androsaemifolium</i>	F	–	50, 0.1	–	6, 0.1	–	12, 0.1	9, 0.1
<i>Castilleja miniata</i>	F	–	50, 0.1	–	6, 1	–	–	–
<i>Collinsia parviflora</i>	F	–	50, 1	–	39, 1	31, 0.1	38, 0.1	–
<i>Erythranthe alsinoides</i>	F	–	50, 3	–	11, 1	8, 0.1	–	–
<i>Eriophyllum lanatum</i>	F	–	–	76, 6	83, 11	69, 1	12, 0.1	64, 1
<i>Cerastium arvense</i>	F	–	–	81, 3	61, 3	31, 2	–	27, 1
<i>Fragaria virginiana</i>	F	–	–	52, 2	33, 4	92, 7	–	82, 3
<i>Acmispon parviflorus</i>	F	–	–	57, 1	39, 3	15, 0.1	–	–
<i>Allium acuminatum</i>	F	–	–	52, 2	39, 4	–	–	–
<i>Fritillaria affinis</i>	F	–	–	57, 1	39, 1	31, 0.1	12, 0.1	36, 1
<i>Lomatium utriculatum</i>	F	–	–	57, 5	–	23, 4	–	27, 1
<i>Rumex acetosella</i>	F	–	–	43, 2	6, 0.1	8, 0.1	–	–
<i>Castilleja hispida</i>	F	–	–	24, 1	61, 0.1	38, 0.1	12, 0.1	64, 1
<i>Microsteris gracilis</i>	F	–	–	5, 0.1	61, 1	15, 1	–	18, 0.1
<i>Penstemon Sserratus</i>	F	–	–	–	72, 1	–	–	–
<i>Drymocallis glandulosa</i>	F	–	–	10, 2	50, 2	–	–	9, 3
<i>Gilia capitata</i>	F	–	–	–	56, 7	–	–	9, 0.1
<i>Hypericum perforatum</i>	F	–	–	5, 3	56, 4	8, 0.1	–	9, 8
<i>Lomatium triternatum</i>	F	–	–	5, 0.1	56, 4	–	12, 0.1	9, 0.1

Abbrev (Plot Count)		CALNUT-ELYGLA (6)	DANINT-RACCAN (2)	FESROE-CERARV-KOEMAC (21)	KOEMAC-(AGRPAL-RACCAN) (18)	ARCUVA-FRAVIR-(FESROE) (13)	RACCAN-(PENDAV) (8)	ARCCOL (11)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Polygonum douglasii</i>	F	–	–	5, 0.1	56, 6	15, 0.1	12, 0.1	9, 0.1
<i>Vicia americana</i> var. <i>americana</i>	F	–	–	5, 0.1	50, 2	8, 0.1	–	18, 0.1
<i>Erodium cicutarium</i>	F	–	–	–	–	46, 1	–	18, 2
<i>Penstemon davidsonii</i>	F	–	–	–	–	–	100, 3	9, 1
<i>Anemone oregana</i>	F	–	–	–	–	31, 4	–	45, 4
<i>Collomia heterophylla</i>	F	–	–	5, 0.1	6, 1	23, 0.1	12, 0.1	45, 2
<i>Geranium carolinianum</i>	F	–	–	–	–	15, 0.1	–	45, 4
<i>Lomatium martindalei</i>	F	–	–	10, 2	6, 3	31, 2	–	55, 2
<i>Carex rossii</i>	Gr	–	50, 8	19, 0.1	6, 3	–	12, 1	27, 1
<i>Luzula multiflora</i>	Gr	–	–	67, 1	61, 2	15, 2	50, 0.1	18, 1
<i>Calamagrostis nutkaensis</i>	G	100, 70	–	–	–	–	–	–
<i>Danthonia intermedia</i>	G	–	100, 14	–	6, 0.1	8, 40	25, 1	–
<i>Dichanthelium acuminatum</i>	G	–	50, 3	–	–	–	–	–
Unidentified <i>Agrostis</i>	G	–	50, 3	5, 1	–	–	–	–
Unidentified G	G	–	50, 3	10, 2	–	–	38, 1	18, 1
<i>Vulpia myuros</i>	G	–	50, 3	33, 3	22, 13	15, 4	–	–
<i>Festuca roemerii</i>	G	–	–	100, 43	–	54, 19	–	55, 2
<i>Koeleria macrantha</i>	G	–	–	81, 4	94, 20	15, 0.1	–	–
<i>Aira caryophyllea</i> var. <i>caryophyllea</i>	G	–	–	62, 3	39, 15	31, 1	–	18, 3
<i>Aira praecox</i>	G	33, 2	–	62, 6	–	8, 3	–	9, 0.1
<i>Elymus glaucus</i>	G	–	–	48, 2	50, 6	38, 2	12, 0.1	55, 5
<i>Bromus hordeaceus</i>	G	–	–	52, 4	22, 8	–	–	–
<i>Agrostis pallens</i>	G	–	–	29, 12	50, 28	31, 1	–	18, 0.1
<i>Festuca rubra</i>	G	–	–	14, 3	44, 22	–	–	–



Abbrev (Plot Count)		CALNUT-ELYGLA (6)	DANINT-RACCAN (2)	FESROE-CERARV-KOEMAC (21)	KOEMAC-(AGRPAL-RACCAN) (18)	ARCUVA-FRAVIR-(FESROE) (13)	RACCAN-(PENDAV) (8)	ARCCOL (11)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Unidentified Cladonia	L	–	50, 13	5, 20	6, 1	–	12, 4	9, 3
Undifferentiated Lichen	L	–	–	–	–	15, 6	62, 12	–
Polytrichum juniperinum	M	–	100, 3	–	–	8, 3	–	18, 3
Racomitrium canescens	M	–	100, 45	10, 30	17, 67	15, 32	25, 45	27, 21
Undifferentiated Moss	M	–	–	–	6, 3	77, 56	88, 29	64, 35

**M168 Rocky Mountain-Vancouverian Subalpine-High Montane Mesic Meadow**

G271 Rocky Mountain-North Pacific Subalpine-Montane Mesic Grassland & Meadow

**Table A-24.** Synoptic table for G271 Rocky Mountain-North Pacific Subalpine-Montane Mesic Grassland & Meadow.

Alliance		A1257 Festuca viridula - Carex hoodii – Lupinus spp. Subalpine Mesic Meadow				A3948 Valeriana sitchensis - Luzula glabrata var. hitchcockii - Xerophyllum tenax Subalpine Mesic Meadow		
Abbrev (Plot Count)		DANINT-POTFLA-(FESVIR) (6)	FESVIR-(PHLDIF-ARECAP) (29)	FESVIR-EUC(ENG,LED) (37)	FESVIR-LUPLAT (21)	VALSIT-CARSPE (54)	VALSIT-LIGGRA (17)	VALSIT-VERVIR (38)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Abies lasiocarpa ssp. lasiocarpa (understory)	CT	17, 2	41, 1	54, 1	24, 1	33, 1	59, 2	29, 2
Sorbus sitchensis	S	–	7, 0.1	11, 1	–	46, 1	12, 1	29, 2
Vaccinium deliciosum	SS	17, 7	34, 2	24, 5	14, 4	43, 7	47, 14	32, 6
Potentilla flabellifolia	F	100, 14	17, 5	3, 0.1	71, 5	46, 3	59, 5	39, 7
Lupinus latifolius	F	67, 5	90, 4	65, 4	100, 17	65, 8	71, 8	79, 7

Abbrev (Plot Count)		DANINT- POTFLA- (FESVIR) (6)	FESVIR- (PHLDIF- ARECAP) (29)	FESVIR-EUC (ENG,LED) (37)	FESVIR- LUPLAT (21)	VALSIT- CARSPE (54)	VALSIT- LIGGRA (17)	VALSIT- VERVIR (38)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Bistorta bistortoides</i>	F	67, 4	–	22, 2	52, 4	43, 7	18, 4	47, 4
<i>Oreostemma alpigenum</i>	F	<b>67, 12</b>	–	–	24, 3	–	12, 2	–
<i>Antennaria lanata</i>	F	50, 4	72, 5	14, 3	71, 6	4, 0.1	18, 1	–
<i>Gentiana calycosa</i>	F	50, 8	10, 1	–	14, 0.1	4, 4	6, 0.1	3, 1
<i>Phlox diffusa</i>	F	–	93, 8	59, 4	14, 6	6, 4	–	<b>5, 12</b>
<i>Eremogone capillaris</i> var. <i>americana</i>	F	–	100, 6	49, 3	24, 2	4, 1	6, 1	–
<i>Erigeron glacialis</i> var. <i>glacialis</i>	F	33, 8	79, 4	49, 4	48, 9	26, 4	76, 8	29, 2
<i>Senecio integerrimus</i>	F	–	72, 3	11, 2	–	–	18, 3	–
<i>Castilleja miniata</i>	F	–	62, 0.1	41, 2	–	17, 1	41, 1	8, 2
<i>Hieracium triste</i>	F	17, 1	45, 2	16, 1	5, 1	15, 1	18, 0.1	3, 0.1
<i>Erythronium</i> <i>grandiflorum</i>	F	–	41, 4	35, 2	–	19, 6	12, 4	13, 3
<i>Lomatium brandegeei</i>	F	–	41, 3	35, 3	–	–	–	–
<i>Ligusticum grayi</i>	F	33, 3	41, 2	<b>54, 11</b>	24, 4	15, 2	<b>88, 11</b>	24, 5
<i>Veronica cusickii</i>	F	33, 1	41, 2	19, 1	33, 3	17, 2	29, 6	8, 1
<i>Chamaenerion</i> <i>angustifolium</i>	F	–	7, 1	24, 1	–	48, 5	24, 2	21, 3
<i>Silene parryi</i>	F	–	34, 1	54, 3	–	15, 2	6, 0.1	3, 1
<i>Anemone occidentalis</i>	F	–	34, 0.1	16, 3	43, 4	24, 7	29, 5	8, 2
<i>Achillea millefolium</i>	F	<b>17, 10</b>	31, 1	62, 2	10, 2	19, 1	29, 1	3, 0.1
<i>Valeriana sitchensis</i>	F	–	3, 0.1	30, 3	14, 2	<b>100, 19</b>	<b>94, 16</b>	<b>92, 19</b>
<i>Veratrum viride</i>	F	–	3, 0.1	19, 2	19, 4	59, 3	65, 2	<b>100, 25</b>
<i>Eucephalus</i> <i>engelmannii</i>	F	–	10, 0.1	<b>57, 14</b>	–	<b>30, 12</b>	29, 9	<b>8, 15</b>
<i>Eucephalus ledophyllus</i>	F	17, 2	–	<b>41, 25</b>	–	<b>6, 18</b>	<b>24, 13</b>	<b>16, 13</b>
<i>Thalictrum occidentale</i>	F	–	–	41, 4	–	24, 7	<b>35, 16</b>	13, 5

Abbrev (Plot Count)		DANINT- POTFLA- (FESVIR) (6)	FESVIR- (PHLDIF- ARECAP) (29)	FESVIR-EUC (ENG,LED) (37)	FESVIR- LUPLAT (21)	VALSIT- CARSPE (54)	VALSIT- LIGGRA (17)	VALSIT- VERVIR (38)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Senecio triangularis	F	–	–	–	–	17, 2	12, 4	45, 6
Juncus parryi	Gr	–	90, 6	14, 3	19, 9	11, 1	6, 0.1	8, 1
Carex spectabilis	Gr	33, 4	7, 2	<b>32, 10</b>	38, 6	<b>98, 33</b>	35, 8	<b>63, 20</b>
Danthonia intermedia	G	<b>83, 29</b>	10, 1	16, 3	–	–	6, 4	–
Festuca viridula	G	50, 7	<b>100, 19</b>	<b>100, 25</b>	<b>100, 29</b>	11, 4	<b>88, 12</b>	26, 7

## 2.B.2.Nd Western North American Interior Chaparral

### *M094 Cool Interior Chaparral*

#### G282 Western North American Montane Sclerophyll Scrub

**Table A-25.** Synoptic table for A3936 Ceanothus velutinus Shrubland.

Alliance		A3936 Ceanothus velutinus Shrubland Alliance		
Abbrev (Plot Count)		CEAVEL (24)	CEAVEL- AMEALN/MAIRAC (13)	SALSCO-ACEGLA- (CEAVEL) (24)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Pseudotsuga menziesii (overstory)	CT	56, 4	46, 7	46, 2
Abies lasiocarpa ssp. lasiocarpa (overstory)	CT	16, 4	23, 1	46, 2
Pseudotsuga menziesii (understory)	CT	76, 2	62, 0.1	38, 3
Abies lasiocarpa ssp. lasiocarpa (understory)	CT	12, 3	46, 0.1	71, 2
Prunus emarginata (understory)	BT	32, 6	<b>92, 21</b>	42, 4
Paxistima myrsinites	S	<b>88, 7</b>	<b>92, 13</b>	<b>96, 15</b>
Ceanothus velutinus	S	<b>100, 38</b>	<b>100, 18</b>	46, 5
Salix scouleriana	S	76, 8	<b>62, 16</b>	<b>79, 24</b>
Spiraea lucida	S	76, 5	69, 4	21, 4
Amelanchier alnifolia	S	52, 5	<b>100, 16</b>	<b>88, 11</b>
Acer glabrum var. douglasii	S	32, 2	<b>85, 11</b>	<b>79, 22</b>
Sorbus scopulina	S	24, 2	62, 6	<b>83, 7</b>
Symphoricarpos albus	S	8, 2	69, 6	33, 3
Mahonia aquifolium	S	20, 3	54, 1	8, 0.1
Rubus nutkanus	S	24, 1	<b>31, 20</b>	62, 8
Chamaenerion angustifolium	F	52, 7	69, 3	79, 2
Maianthemum racemosum ssp. amplexicaule	F	12, 1	77, 4	71, 1
Eucephalus engelmannii	F	28, 2	69, 4	42, 1
Thalictrum occidentale	F	24, 1	46, 5	71, 3
Prosartes hookeri	F	4, 0.1	54, 4	29, 3
Calamagrostis rubescens	G	<b>88, 15</b>	54, 7	29, 2

## 2.C.2.Na North American Bog & Fen

### ***M063 North Pacific Bog & Fen***

G284 North Pacific Acidic Open Bog & Fen

G285 North Pacific Circumneutral to Alkaline Open Fen

G610 North Pacific Maritime Wooded Bog & Poor Fen

**Table A-26.** Synoptic table for G284 North Pacific Acidic Open Bog & Fen, G285 North Pacific Circumneutral to Alkaline Open Fen, and G610 North Pacific Maritime Wooded Bog & Poor Fen.

Group		G284	G285	G610		
Alliance		A4409 <i>Ledum groenlandicum</i> - <i>Kalmia microphylla</i> - <i>Rhynchospora alba</i> Shrub & Open Bog	A4405 <i>Carex aquatilis</i> var. <i>dives</i> - <i>Carex cusickii</i> Intermediate Fen	A4407 <i>Pinus contorta</i> - <i>Tsuga heterophylla</i> / <i>Ledum groenlandicum</i> / <i>Sphagnum capillifolium</i> Bog Woodland		A4408 <i>Pinus contorta</i> - <i>Tsuga heterophylla</i> / <i>Ledum groenlandicum</i> / <i>Carex livida</i> Coastal Bog Woodland
Abbrev (Plot Count)		LEDGRO-KALMIC/SPHAGN (22)	CAR(AQUUD,NIG,UTR)-CALLEP (40)	PINCON/LEDGRO/SPHAGN (23)	TSUHET-(THUPLI)/LEDGRO/SPHAGN (14)	THUPLI-TSUHET/LYSAME/SPHAGN (9)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Pinus contorta</i> (overstory)	CT	27, 2	0, 0	<b>100, 35</b>	7, 2	0, 0
<i>Tsuga heterophylla</i> (overstory)	CT	0, 0	0, 0	9, 2	<b>100, 27</b>	<b>88, 25</b>
<i>Thuja plicata</i> (overstory)	CT	0, 0	0, 0	9, 2	<b>50, 19</b>	<b>100, 23</b>
<i>Pinus monticola</i> (overstory)	CT	14, 0.1	0, 0	9, 2	43, 4	0, 0
<i>Tsuga heterophylla</i> (understory)	CT	41, 3	0, 0	87, 8	0, 0	44, 5
<i>Thuja plicata</i> (understory)	CT	36, 3	5, 0.1	<b>78, 12</b>	0, 0	44, 6

Abbrev (Plot Count)		LEDGRO- KALMIC/SPHAGN (22)	CAR(AQUD,NIG, UTR)-CALLEP (40)	PINCON/LEDGRO/ SPHAGN (23)	TSUHET- (THUPLI)/LEDGRO/ SPHAGN (14)	THUPLI- TSUHET/LYSAME/ SPHAGN (9)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Rhododendron groenlandicum	S	<b>100, 52</b>	0, 0	<b>96, 38</b>	<b>100, 50</b>	<b>22, 62</b>
Gaultheria shallon	S	45, 2	0, 0	<b>100, 20</b>	<b>93, 18</b>	<b>100, 15</b>
Spiraea douglasii	S	50, 6	0, 0	17, 2	57, 2	44, 4
Frangula purshiana ssp. purshiana	S	14, 0.1	0, 0	17, 3	21, 6	67, 4
Rhododendron menziesii	S	0, 0	0, 0	0, 0	14, 2	67, 3
Vaccinium ovalifolium	S	5, 2	0, 0	9, 2	<b>14, 10</b>	44, 8
Vaccinium ovalifolium	S	5, 2	0, 0	9, 2	<b>14, 10</b>	44, 8
Malus fusca	S	18, 2	0, 0	13, 6	14, 4	<b>56, 19</b>
Kalmia microphylla	SS	<b>95, 32</b>	18, 8	<b>83, 22</b>	<b>71, 28</b>	<b>22, 10</b>
Vaccinium oxycoccos	SS	<b>77, 17</b>	0, 0	<b>48, 10</b>	36, 4	0, 0
Phyllodoce empetriformis	SS	0, 0	50, 3	0, 0	0, 0	0, 0
Linnaea borealis ssp. longiflora	SS	0, 0	0, 0	4, 4	0, 0	78, 3
Pteridium aquilinum ssp. pubescens	Fe	55, 6	0, 0	<b>87, 13</b>	<b>43, 24</b>	<b>22, 19</b>
Struthiopteris spicant	Fe	0, 0	0, 0	4, 0.1	0, 0	<b>89, 11</b>
Caltha biflora	F	0, 0	<b>92, 24</b>	0, 0	0, 0	0, 0
Leptarrhena pyrolifolia	F	0, 0	52, 6	0, 0	0, 0	0, 0
Pedicularis groenlandica	F	0, 0	48, 3	0, 0	0, 0	0, 0
Veratrum viride	F	0, 0	42, 1	0, 0	0, 0	0, 0
Lysichiton americanus	F	23, 2	<b>5, 10</b>	30, 2	<b>50, 10</b>	100, 6
Cornus (canadensis, unalaschkensis)	F	0, 0	<b>5, 16</b>	39, 7	14, 9	89, 4

Abbrev (Plot Count)		LEDGRO- KALMIC/SPHAGN (22)	CAR(AQUD,NIG, UTR)-CALLEP (40)	PINCON/LEDGRO/ SPHAGN (23)	TSUHET- (THUPLI)/LEDGRO/ SPHAGN (14)	THUPLI- TSUHET/LYSAME/ SPHAGN (9)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Lysimachia europaea	F	5, 0.1	28, 3	4, 2	7, 4	44, 3
Carex nigricans	Gr	0, 0	<b>78, 34</b>	0, 0	0, 0	0, 0
Carex aquatilis	Gr	<b>27, 12</b>	<b>52, 15</b>	0, 0	14, 2	<b>11, 18</b>
Carex obnupta	Gr	<b>5, 38</b>	0, 0	9, 0.1	0, 0	<b>67, 18</b>
Sphagnum spp.	M	<b>91, 63</b>	<b>40, 46</b>	<b>87, 31</b>	<b>79, 42</b>	<b>100, 42</b>
Undifferentiated Moss	M	<b>5, 38</b>	<b>40, 19</b>	<b>26, 20</b>	<b>50, 40</b>	<b>44, 26</b>

**2.C.4.Nb Western North American Freshwater Shrubland, Wet Meadow & Marsh**

***M073 Vancouverian Lowland Wet Shrubland, Wet Meadow & Marsh***

G322 Vancouverian Wet Shrubland

**Table A-27.** Synoptic table for G322 Vancouverian Wet Shrubland.

<b>Alliance</b>		A4418 <i>Alnus viridis</i> - <i>Acer circinatum</i> - <i>Salix sitchensis</i> Montane Wet Shrubland										A4419 <i>Spiraea douglasii</i> - <i>Malus fusca</i> - <i>Salix sitchensis</i> Lowland Wet Shrubland
<b>Abbrev (Plot Count)</b>		ACECIR/ (PTEAQU) (33)	ACECIR/ ATHFIL- TOLMEN (30)	ALNVIR- ACECIR (3)	ALNVIR- RUBSPE- (OPLHOR) (96)	CORSER Pacific (11)	OPLHOR Pacific (6)	RIBBRA- RUBSPE (11)	SALSIT (9)	SALSIT/ EQUARV- PETFRI (16)	SALIX- SPIDOU/ CAR(AQU, OBN,UTR) (31)	
<b>Species (Strata)</b>	<b>Specific Growth Form</b>	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	
<i>Tsuga heterophylla</i> (understory)	CT	12, 0.1	10, 1	33, 1	8, 1	9, 0.1	50, 2	18, 1	0, 0	12, 0.1	13, 2	
<i>Abies amabilis</i> (understory)	CT	3, 0.1	13, 1	0, 0	29, 2	0, 0	67, 2	9, 1	0, 0	25, 1	0, 0	
<i>Thuja plicata</i> (understory)	CT	0, 0	3, 3	33, 3	6, 1	0, 0	50, 2	9, 1	0, 0	0, 0	29, 1	
<i>Acer macrophyllum</i> (understory)	BT	9, 2	3, 0.1	67, 8	0, 0	0, 0	0, 0	9, 0.1	0, 0	0, 0	0, 0	
<i>Populus trichocarpa</i> (understory)	BT	0, 0	0, 0	67, 3	1, 3	9, 1	0, 0	0, 0	0, 0	12, 9	0, 0	
<i>Acer circinatum</i>	S	100, 79	100, 67	100, 28	7, 7	45, 14	17, 10	9, 3	0, 0	6, 1	3, 10	



Abbrev (Plot Count)		ACECIR/ (PTEAQU) (33)	ACECIR/ ATHFIL- TOLMEN (30)	ALNVIR- ACECIR (3)	ALNVIR- RUBSPE- (OPLHOR) (96)	CORSER Pacific (11)	OPLHOR Pacific (6)	RIBBRA- RUBSPE (11)	SALSIT (9)	SALSIT/ EQUARV- PETFRI (16)	SALIX- SPIDOU/ CAR(AQUD, OBN,UTR) (31)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Sambucus racemosa</i>	S	42, 2	53, 3	33, 3	52, 7	9, 1	17, 0.1	27, 4	11, 4	19, 2	0, 0
<i>Alnus viridis</i> ssp. <i>sinuata</i>	S	39, 6	<b>43, 20</b>	<b>100, 31</b>	<b>99, 68</b>	0, 0	0, 0	<b>9, 10</b>	33, 8	50, 7	<b>6, 14</b>
<i>Rubus nutkanus</i>	S	39, 7	27, 7	67, 4	27, 5	45, 7	0, 0	<b>27, 27</b>	11, 1	25, 0.1	3, 1
<i>Cornus</i> ( <i>occidentalis</i> , <i>stolonifera</i> )	S	<b>27, 13</b>	<b>13, 10</b>	0, 0	<b>3, 10</b>	<b>82, 68</b>	0, 0	0, 0	22, 3	<b>31, 25</b>	35, 3
<i>Oplopanax horridus</i>	S	21, 1	<b>87, 12</b>	0, 0	<b>36, 15</b>	9, 2	<b>100, 32</b>	27, 8	0, 0	0, 0	3, 5
<i>Rubus spectabilis</i>	S	15, 1	77, 8	<b>33, 13</b>	<b>83, 25</b>	36, 2	<b>67, 15</b>	<b>100, 38</b>	33, 4	62, 5	6, 2
<i>Ribes bracteosum</i>	S	6, 1	17, 2	0, 0	18, 6	0, 0	83, 7	<b>91, 22</b>	11, 1	44, 6	0, 0
<i>Vaccinium ovalifolium</i>	S	6, 1	13, 2	0, 0	21, 5	0, 0	67, 5	18, 4	0, 0	12, 2	0, 0
<i>Vaccinium ovalifolium</i>	S	6, 1	13, 2	0, 0	21, 5	0, 0	67, 5	18, 4	0, 0	12, 2	0, 0
<i>Rosa nutkana</i>	S	3, 2	0, 0	67, 2	0, 0	9, 5	0, 0	0, 0	22, 3	0, 0	10, 1
<i>Spiraea douglasii</i>	S	0, 0	0, 0	33, 3	6, 3	0, 0	0, 0	0, 0	67, 1	6, 1	<b>100, 38</b>
<i>Salix sitchensis</i>	S	0, 0	0, 0	0, 0	<b>17, 10</b>	<b>45, 14</b>	0, 0	0, 0	<b>100, 48</b>	<b>100, 51</b>	<b>48, 28</b>
<i>Polystichum munitum</i>	F	33, 3	53, 2	67, 7	9, 2	9, 0.1	0, 0	27, 3	0, 0	0, 0	0, 0
<i>Athyrium filix- femina</i> ssp. <i>cyclosorum</i>	F	24, 1	80, 8	33, 7	<b>93, 13</b>	55, 8	<b>67, 15</b>	<b>82, 10</b>	<b>56, 21</b>	38, 2	35, 1
<i>Gymnocarpium dryopteris</i>	F	0, 0	30, 2	33, 3	31, 6	0, 0	83, 6	27, 1	0, 0	19, 1	0, 0

Abbrev (Plot Count)		ACECIR/ (PTEAQU) (33)	ACECIR/ ATHFIL- TOLMEN (30)	ALNVIR- ACECIR (3)	ALNVIR- RUBSPE- (OPLHOR) (96)	CORSER Pacific (11)	OPLHOR Pacific (6)	RIBBRA- RUBSPE (11)	SALSIT (9)	SALSIT/ EQUARV- PETFRI (16)	SALIX- SPIDOU/ CAR(AQU, OBN,UTR) (31)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Equisetum arvense</i>	F ally	0, 0	0, 0	0, 0	7, 1	9, 0.1	17, 0.1	0, 0	56, 6	<b>50, 17</b>	6, 1
<i>Maianthemum stellatum</i>	F	39, 1	47, 2	33, 1	27, 6	36, 3	17, 2	0, 0	0, 0	0, 0	0, 0
<i>Viola glabella</i>	F	36, 2	30, 1	33, 1	50, 5	18, 2	33, 2	55, 2	0, 0	25, 1	0, 0
<i>Maianthemum racemosum</i> ssp. <i>amplexicaule</i>	F	27, 1	33, 6	0, 0	29, 2	45, 1	0, 0	0, 0	0, 0	6, 1	0, 0
<i>Claytonia sibirica</i>	F	12, 7	47, 1	33, 3	30, 6	18, 1	17, 1	18, 1	0, 0	12, 3	0, 0
<i>Tiarella trifoliata</i>	F	9, 1	23, 1	0, 0	27, 4	0, 0	50, 2	18, 1	0, 0	6, 0.1	0, 0
<i>Rumex acetosella</i>	F	9, 2	0, 0	67, 7	2, 2	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0
<i>Corydalis scouleri</i>	F	<b>3, 13</b>	<b>23, 10</b>	0, 0	<b>3, 11</b>	0, 0	<b>50, 33</b>	9, 3	0, 0	0, 0	0, 0
<i>Stachys cooleyae</i>	F	3, 0.1	13, 2	33, 8	6, 2	<b>18, 10</b>	17, 1	45, 6	22, 2	25, 3	0, 0
<i>Streptopus lanceolatus</i>	F	3, 1	13, 2	0, 0	35, 6	0, 0	50, 3	27, 4	0, 0	0, 0	0, 0
<i>Anaphalis margaritacea</i>	F	3, 0.1	7, 1	67, 2	5, 1	0, 0	0, 0	0, 0	11, 1	31, 0.1	0, 0
<i>Streptopus amplexifolius</i>	F	0, 0	27, 1	0, 0	14, 1	9, 0.1	50, 6	18, 1	11, 1	6, 1	0, 0
<i>Veratrum viride</i>	F	0, 0	10, 2	0, 0	42, 3	18, 2	<b>17, 25</b>	27, 6	0, 0	6, 3	0, 0
<i>Rubus pedatus</i>	F	0, 0	7, 1	0, 0	2, 4	0, 0	50, 2	18, 2	0, 0	0, 0	0, 0
<i>Lysichiton americanus</i>	F	0, 0	3, 2	0, 0	<b>1, 45</b>	<b>9, 15</b>	<b>17, 25</b>	0, 0	<b>67, 12</b>	0, 0	68, 5
<i>Valeriana sitchensis</i>	F	0, 0	0, 0	0, 0	26, 4	0, 0	50, 6	36, 8	0, 0	<b>19, 10</b>	0, 0

<b>Abbrev (Plot Count)</b>		ACECIR/ (PTEAQU) (33)	ACECIR/ ATHFIL- TOLMEN (30)	ALNVIR- ACECIR (3)	ALNVIR- RUBSPE- (OPLHOR) (96)	CORSER Pacific (11)	OPLHOR Pacific (6)	RIBBRA- RUBSPE (11)	SALSIT (9)	SALSIT/ EQUARV- PETFRI (16)	SALIX- SPIDOU/ CAR(AQUD, OBN,UTR) (31)
<b>Species (Strata)</b>	<b>Specific Growth Form</b>	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Trautvetteria caroliniensis	F	0, 0	0, 0	0, 0	8, 5	0, 0	50, 7	9, 1	11, 3	6, 3	0, 0
Unidentified Grass	G	0, 0	10, 2	0, 0	10, 2	9, 1	0, 0	27, 2	22, 3	50, 1	3, 0.1
Scirpus microcarpus	Gr	0, 0	0, 0	0, 0	1, 3	0, 0	0, 0	0, 0	44, 23	12, 3	10, 2
Carex obnupta	Gr	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	11, 8	0, 0	55, 23
Carex aquatilis	Gr	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	56, 24	0, 0	35, 38

**M893 Western North American Montane Marsh, Wet Meadow & Shrubland**

G520 Vancouverian & Rocky Mountain Subalpine & Alpine Snowbed, Wet Meadow & Dwarf-Shrubland

G521 Vancouverian-Rocky Mountain Montane Wet Meadow & Marsh

G527 Western Montane-Subalpine Riparian & Seep Shrubland

**Table A-28.** Synoptic table for G520 Vancouverian & Rocky Mountain Subalpine & Alpine Snowbed, Wet Meadow & Dwarf-Shrubland, G521 Vancouverian-Rocky Mountain Montane Wet Meadow & Marsh, and G527 Western Montane-Subalpine Riparian & Seep Shrubland.

Group		G520			G521		G527				
Alliance		A3831 Kalmia microphylla - Cassiope mertensiana - Dryas drummondii Wet Dwarf- Shrubland	A3832 Carex nigricans - Sibbaldia procumbens - Trollius laxus Wet Meadow		A4427 Heracleum maximum - Carex scopulorum var. bracteosa - Veratrum viride Wet Meadow		A1003 Salix commutata Wet Shrubland		A4416 Alnus viridis ssp. sinuata Riparian Shrubland		A4421 Alnus incana - Cornus sericea Riparian Shrubland
Abbrev (Plot Count)		KALMIC/ CARNIG (16)	CARNIG (58)	CARSPE- POTFLA (18)	HERMAX (16)	SAUAME- HERMAX (1)	SALCOM (22)	SALCOM/ SENTRI (20)	ALNVIR Mesic (37)	SALSIT- (ALNINC)/ ANGARG (22)	SAL(MEL, SIT) (12)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Abies lasiocarpa (understory)	CT	56, 3	14, 1	0, 0	0, 0	0, 0	50, 2	45, 6	32, 2	32, 3	8, 1
Abies lasiocarpa ssp. lasiocarpa (understory)	CT	0, 0	0, 0	50, 1	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0
Alnus viridis ssp. sinuata	S	0, 0	0, 0	0, 0	25, 3	0, 0	14, 1	10, 5	100, 76	64, 21	25, 5
Sambucus racemosa	S	0, 0	0, 0	0, 0	6, 0.1	0, 0	0, 0	0, 0	49, 6	18, 9	0, 0
Salix sitchensis	S	0, 0	0, 0	0, 0	0, 0	0, 0	9, 4	5, 30	5, 1	100, 63	100, 34

Abbrev (Plot Count)		KALMIC/ CARNIG (16)	CARNIG (58)	CARSPE- POTFLA (18)	HERMAX (16)	SAUAME- HERMAX (1)	SALCOM (22)	SALCOM/ SENTRI (20)	ALNVIR Mesic (37)	SALSIT- (ALNINC)/ ANGARG (22)	SAL(MEL, SIT) (12)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Lonicera involucrata</i> var. <i>involucrata</i>	S	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	10, 2	5, 1	50, 5	0, 0
<i>Salix commutata</i>	S	19, 2	9, 3	28, 3	0, 0	0, 0	100, 50	100, 52	0, 0	5, 10	8, 7
<i>Salix melanopsis</i>	S	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	9, 9	50, 38
<i>Phyllodoce</i> <i>empetriformis</i>	SS	62, 9	60, 3	67, 2	0, 0	0, 0	59, 5	30, 9	3, 1	0, 0	0, 0
<i>Vaccinium</i> <i>deliciosum</i>	SS	62, 11	36, 1	50, 3	0, 0	0, 0	18, 5	25, 9	3, 0.1	0, 0	0, 0
<i>Kalmia microphylla</i>	SS	75, 17	5, 3	11, 4	0, 0	0, 0	5, 8	0, 0	0, 0	0, 0	0, 0
<i>Equisetum arvense</i>	F ally	0, 0	5, 6	6, 2	12, 1	0, 0	64, 8	45, 11	8, 2	27, 2	0, 0
<i>Thalictrum</i> <i>occidentale</i>	F	0, 0	0, 0	0, 0	56, 12	100, 1	0, 0	10, 1	43, 5	36, 6	8, 1
<i>Viola glabella</i>	F	0, 0	0, 0	0, 0	12, 2	0, 0	5, 3	25, 2	35, 7	45, 9	8, 1
<i>Heracleum</i> <i>maximum</i>	F	0, 0	0, 0	6, 0.1	100, 26	100, 22	5, 1	15, 1	32, 4	41, 6	0, 0
<i>Veratrum viride</i>	F	25, 2	7, 5	11, 0.1	56, 3	0, 0	5, 0.1	30, 2	27, 8	18, 4	0, 0
<i>Valeriana sitchensis</i>	F	12, 2	3, 6	22, 1	25, 2	100, 0.1	9, 2	65, 11	24, 13	27, 14	8, 1
<i>Galium triflorum</i>	F	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	10, 2	24, 4	41, 4	0, 0
<i>Senecio triangularis</i>	F	6, 3	2, 2	11, 1	38, 9	100, 5	0, 0	60, 5	19, 1	41, 3	8, 1
<i>Cirsium edule</i>	F	0, 0	0, 0	0, 0	94, 4	100, 3	14, 0.1	5, 0.1	14, 1	5, 0.1	0, 0
<i>Chamaenerion</i> <i>angustifolium</i>	F	0, 0	0, 0	6, 0.1	38, 5	100, 6	9, 1	20, 4	11, 1	41, 6	8, 1
<i>Achillea millefolium</i>	F	0, 0	0, 0	6, 2	38, 4	100, 1	0, 0	10, 7	11, 2	18, 2	8, 0.1
<i>Angelica arguta</i>	F	0, 0	0, 0	0, 0	6, 3	0, 0	0, 0	25, 6	11, 1	41, 3	8, 2
<i>Luetkea pectinata</i>	F	25, 2	66, 5	33, 7	0, 0	0, 0	32, 1	0, 0	5, 13	0, 0	0, 0
<i>Castilleja miniata</i>	F	0, 0	0, 0	0, 0	12, 2	100, 0.1	0, 0	5, 1	3, 0.1	0, 0	0, 0

Abbrev (Plot Count)		KALMIC/ CARNIG (16)	CARNIG (58)	CARSPE- POTFLA (18)	HERMAX (16)	SAUAME- HERMAX (1)	SALCOM (22)	SALCOM/ SENTRI (20)	ALNVIR Mesic (37)	SALSIT- (ALNINC)/ ANGARG (22)	SAL(MEL, SIT) (12)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Geum macrophyllum	F	0, 0	0, 0	0, 0	12, 1	100, 1	0, 0	0, 0	3, 1	0, 0	0, 0
Potentilla flabellifolia	F	69, 6	28, 3	94, 22	0, 0	0, 0	36, 4	50, 5	0, 0	0, 0	0, 0
Lupinus latifolius	F	6, 5	17, 2	28, 1	38, 8	100, 18	23, 2	20, 5	0, 0	5, 3	0, 0
Bistorta bistortoides	F	6, 4	14, 5	50, 4	31, 2	100, 0.1	18, 1	10, 3	0, 0	0, 0	0, 0
Caltha biflora	F	44, 5	14, 3	44, 4	0, 0	0, 0	59, 7	30, 3	0, 0	5, 1	0, 0
Leptarrhena pyrolifolia	F	6, 2	10, 1	6, 2	0, 0	0, 0	77, 10	40, 2	0, 0	5, 2	0, 0
Gentiana calycosa	F	25, 3	7, 2	50, 2	0, 0	0, 0	32, 8	25, 1	0, 0	0, 0	0, 0
Pedicularis groenlandica	F	25, 3	5, 6	39, 2	0, 0	0, 0	55, 3	25, 1	0, 0	0, 0	0, 0
Ranunculus eschschooltzii	F	0, 0	5, 1	6, 1	0, 0	100, 2	5, 2	0, 0	0, 0	0, 0	0, 0
Canadanthus modestus	F	0, 0	2, 10	0, 0	19, 5	100, 1	0, 0	5, 2	0, 0	27, 9	8, 1
Potentilla drummondii	F	0, 0	0, 0	11, 2	0, 0	100, 0.1	0, 0	0, 0	0, 0	0, 0	0, 0
Polemonium pulcherrimum	F	0, 0	0, 0	0, 0	19, 2	100, 5	0, 0	5, 20	0, 0	5, 2	0, 0
Saussurea americana	F	0, 0	0, 0	0, 0	19, 2	100, 18	0, 0	0, 0	0, 0	0, 0	0, 0
Silene parryi	F	0, 0	0, 0	0, 0	0, 0	100, 2	0, 0	0, 0	0, 0	0, 0	0, 0
Unidentified G	G	0, 0	3, 2	6, 0.1	19, 11	100, 1	5, 10	15, 1	16, 4	5, 2	8, 0.1
Bromus sitchensis	G	0, 0	0, 0	0, 0	50, 12	100, 5	5, 0.1	0, 0	8, 7	9, 6	0, 0
Phleum alpinum	G	0, 0	5, 4	39, 1	6, 0.1	100, 0.1	18, 2	25, 1	3, 0.1	0, 0	0, 0
Carex spectabilis	Gr	25, 2	45, 7	67, 26	38, 5	100, 9	41, 6	25, 4	8, 2	9, 1	0, 0
Carex nigricans	Gr	94, 35	100, 54	67, 14	0, 0	0, 0	55, 9	15, 4	0, 0	0, 0	0, 0

<b>Abbrev (Plot Count)</b>		KALMIC/ CARNIG (16)	CARNIG (58)	CARSPE- POTFLA (18)	HERMAX (16)	SAUAME- HERMAX (1)	SALCOM (22)	SALCOM/ SENTRI (20)	ALNVIR Mesic (37)	SALSIT- (ALNINC)/ ANGARG (22)	SAL(MEL, SIT) (12)
<b>Species (Strata)</b>	<b>Specific Growth Form</b>	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Undifferentiated Moss	M	<b>31, 13</b>	<b>34, 16</b>	<b>33, 10</b>	6, 2	0, 0	<b>82, 24</b>	<b>45, 20</b>	16, 6	0, 0	0, 0

#### 4.B.1.Nb Western North American Alpine Tundra

##### *M099 Rocky Mountain-Sierran Alpine Tundra*

##### G314 Rocky Mountain-Sierran Alpine Turf & Fell-field

**Table A-29.** Synoptic table for G314 Rocky Mountain-Sierran Alpine Turf & Fell-field.

Alliance		A4021 Rocky Mountain Alpine Sparse Herb Bedrock & Scree	
Abbrev (Plot Count)		ATHAME-CRYACR (16)	SAXBRO (6)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover
<i>Athyrium distentifolium</i> ssp. <i>americanum</i>	F	100, 17	–
<i>Cryptogramma acrostichoides</i>	F	56, 0.1	50, 0.1
<i>Luetkea pectinata</i>	F	69, 6	33, 2
<i>Valeriana sitchensis</i>	F	44, 1	–
<i>Veratrum viride</i>	F	44, 1	–
<i>Achillea millefolium</i>	F	–	83, 0.1
<i>Douglasia laevigata</i>	F	–	83, 2
<i>Saxifraga</i> ( <i>austromontana</i> , <i>vespertina</i> )	F	–	100, 5
<i>Phacelia sericea</i>	F	–	67, 0.1
<i>Antennaria alpina</i>	F	–	50, 0.1
<i>Penstemon davidsonii</i>	F	–	50, 1
<i>Phlox diffusa</i>	F	6, 0.1	50, 2
<i>Sedum oreganum</i>	F	–	50, 1
<i>Carex spectabilis</i>	Gr	69, 5	17, 0.1
<i>Juncus drummondii</i>	Gr	56, 3	–
Undifferentiated Moss	M	44, 2	33, 2



**M101 Vancouverian Alpine Tundra**

G317 North Pacific Alpine-Subalpine Dwarf-Shrubland & Heath

**Table A-30.** Synoptic table for G317 North Pacific Alpine-Subalpine Dwarf-Shrubland & Heath.

Alliance		A1078 Empetrum nigrum Alpine Dwarf-Shrubland		A3331 Phyllodoce empetriformis - Cassiope mertensiana - Vaccinium deliciosum Alpine Dwarf-Shrubland			A4086 Arctostaphylos uva-ursi Cascadian Alpine Dwarf-Shrubland
Abbrev (Plot Count)		EMPNIG-LUPSEL (10)	PHYGLA/OREALP (5)	CASMER-PHYEMP (51)	PHYEMP-VACDEL (68)	PHYEMP/LUPLAT (49)	ARCUVA (5)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Abies lasiocarpa ssp. lasiocarpa (understory)	CT	40, 4	40, 2	22, 1	56, 2	55, 3	100, 1
Tsuga mertensiana (understory)	CT	10, 1	–	39, 1	66, 5	35, 2	–
Callitropsis nootkatensis (understory)	CT	–	20, 0.1	8, 1	47, 1	10, 1	–
Dasiphora fruticosa	S	–	–	–	–	–	80, 9
Empetrum nigrum	SS	100, 43	100, 9	12, 4	1, 0.1	–	60, 10
Cassiope mertensiana	SS	60, 7	80, 11	100, 28	99, 18	53, 10	–
Vaccinium deliciosum	SS	60, 4	40, 1	94, 6	100, 19	86, 21	–
Phyllodoce empetriformis	SS	50, 8	80, 6	100, 27	100, 34	100, 21	20, 10
Phyllodoce glanduliflora	SS	40, 10	100, 29	6, 9	–	2, 0.1	20, 1
Juniperus communis	SS	50, 10	60, 6	8, 0.1	1, 2	6, 0.1	80, 6
Arctostaphylos uva-ursi	SS	10, 10	20, 0.1	–	1, 3	–	80, 49
Diphasiastrum sitchense	F ally	20, 2	20, 2	41, 3	29, 3	4, 4	–
Luetkea pectinata	F	50, 1	80, 3	90, 5	75, 5	57, 5	–
Lupinus latifolius	F	40, 8	40, 10	18, 4	38, 3	92, 15	40, 4
Lupinus lepidus	F	40, 4	–	6, 5	–	–	80, 5

Abbrev (Plot Count)		EMPNI- LUPSEL (10)	PHYGLA/ OREALP (5)	CASMER- PHYEMP (51)	PHYEMP- VACDEL (68)	PHYEMP/ LUPLAT (49)	ARCUVA (5)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Bistorta bistortoides</i>	F	30, 0.1	60, 1	20, 1	21, 1	53, 5	–
<i>Phlox diffusa</i>	F	20, 3	60, 2	6, 0.1	7, 1	4, 4	60, 4
<i>Antennaria lanata</i>	F	10, 0.1	60, 3	27, 3	22, 2	22, 2	–
<i>Erigeron aureus</i>	F	30, 0.1	60, 1	–	–	–	–
<i>Erigeron glacialis</i> var. <i>glacialis</i>	F	10, 0.1	60, 0.1	24, 0.1	25, 2	35, 5	–
<i>Penstemon davidsonii</i>	F	20, 0.1	60, 0.1	2, 0.1	–	–	20, 3
<i>Saxifraga</i> ( <i>austromontana</i> , <i>vespertina</i> )	F	–	40, 0.1	–	–	–	–
<i>Hieracium triste</i>	F	20, 0.1	20, 0.1	45, 0.1	40, 1	20, 1	–
<i>Castilleja parviflora</i>	F	–	20, 0.1	24, 1	18, 1	43, 2	–
<i>Potentilla flabellifolia</i>	F	–	–	2, 5	22, 3	41, 6	20, 2
<i>Valeriana sitchensis</i>	F	–	–	4, 1	16, 3	53, 6	–
<i>Solidago multiradiata</i>	F	10, 3	–	–	–	–	80, 1
<i>Achillea millefolium</i>	F	10, 2	–	–	–	2, 1	60, 1
<i>Campanula rotundifolia</i>	F	10, 0.1	–	–	–	–	60, 1
<i>Carex spectabilis</i>	Gr	60, 4	80, 2	49, 2	38, 3	61, 10	20, 2
<i>Luzula piperi</i>	Gr	20, 0.1	60, 1	47, 1	16, 1	12, 3	–
<i>Poa cusickii</i>	G	10, 0.1	60, 4	6, 1	4, 0.1	2, 0.1	–
Undifferentiated Lichen	L	20, 6	80, 8	31, 3	32, 6	6, 4	20, 60
Undifferentiated Moss	M	–	20, 0.1	51, 7	47, 8	8, 3	–

G319 North Pacific Alpine-Subalpine Bedrock & Scree

**Table A-31.** Synoptic table for G319 North Pacific Alpine-Subalpine Bedrock & Scree.

<b>Alliance</b>		A3780 Phlox spp. - Lomatium spp. - Carex spp. Alpine Talus & Scree Sparse							A3781 Paxistima myrsinites - Saxifraga spp. - Luina hypoleuca Alpine Rock Crevice
<b>Abbrev (Plot Count)</b>		ARTLUD- LOMMAR (14)	CHALAT- OXYDIG- (VALSIT) (12)	DASFRU- (PHLDIF) (7)	ELMRAC (7)	EUCPAU- (PHAHAS- CASMIN) (21)	LUIHYP- (LOMMAR- CASPAR) (3)	PHLDIF- (LOMMAR) (12)	LEWCOL- (JUNPAR) (4)
<b>Species (Strata)</b>	<b>Specific Growth Form</b>	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Abies lasiocarpa ssp. lasiocarpa (overstory)	CT	–	–	–	–	14, 0.1	33, 1	42, 1	–
Abies lasiocarpa ssp. lasiocarpa (understory)	CT	–	8, 0.1	14, 1	29, 0.1	38, 1	67, 4	33, 1	50, 0.1
Pinus albicaulis (understory)	CT	–	–	–	–	–	–	17, 2	50, 0.1
Dasiphora fruticosa	S	14, 0.1	–	100, 9	–	–	33, 1	–	–
Paxistima myrsinites	S	14, 0.1	–	–	–	14, 6	33, 3	33, 1	100, 1
Amelanchier alnifolia	S	–	–	–	–	–	–	–	50, 0.1
Juniperus communis	SS	7, 3	–	14, 2	–	14, 1	33, 1	50, 6	50, 1
Arctostaphylos nevadensis ssp. nevadensis	SS	–	–	–	–	–	–	–	75, 4
Athyrium distentifolium ssp. americanum	Fe	–	85, 8	–	43, 1	–	–	–	–
Cryptogramma acrostichoides	Fe	14, 2	23, 0.1	–	14, 0.1	19, 2	33, 0.1	8, 0.1	100, 1

Abbrev (Plot Count)		ARTLUD- LOMMAR (14)	CHALAT- OXYDIG- (VALSIT) (12)	DASFRU- (PHLDIF) (7)	ELMRAC (7)	EUCPAU- (PHAHAS- CASMIN) (21)	LUIHYP- (LOMMAR- CASPAR) (3)	PHLDIF- (LOMMAR) (12)	LEWCOL- (JUNPAR) (4)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Myriopteris gracillima	Fe	–	–	–	–	–	–	–	75, 1
Diphasiastrum sitchense	F ally	–	–	–	–	–	–	–	50, 1
Selaginella wallacei	F ally	–	–	–	–	–	–	–	50, 2
Lomatium martindalei	F	86, 1	–	14, 0.1	29, 2	52, 2	67, 4	50, 2	–
Artemisia ludoviciana	F	100, 27	–	–	–	38, 6	–	8, 5	–
Epilobium anagallidifolium	F	64, 1	31, 3	–	86, 2	24, 0.1	–	–	–
Erysimum arenicola	F	64, 0.1	–	14, 0.1	–	–	–	33, 3	–
Phacelia heterophylla	F	79, 8	–	–	–	–	–	–	–
Phlox diffusa	F	50, 2	8, 0.1	86, 5	–	57, 8	33, 2	100, 13	100, 1
Achillea millefolium	F	57, 3	31, 0.1	71, 2	14, 0.1	48, 1	–	58, 3	50, 0.1
Eucephalus paucicapitatus	F	43, 1	–	–	14, 0.1	100, 25	–	25, 3	–
Cirsium edule	F	43, 1	–	–	14, 0.1	43, 2	–	8, 0.1	–
Chamaenerion angustifolium	F	50, 3	15, 1	–	–	29, 2	–	8, 0.1	–
Delphinium glareosum	F	57, 2	–	–	–	–	–	–	–
Valeriana sitchensis	F	21, 1	69, 14	–	29, 2	52, 6	–	17, 2	–
Chamaenerion latifolium	F	–	69, 14	–	14, 3	–	–	–	–
Oxyria digyna	F	–	77, 11	–	14, 0.1	–	–	–	–
Aruncus dioicus	F	–	54, 2	–	–	–	–	–	–
Erythranthe lewisii	F	–	54, 2	–	14, 0.1	–	–	–	–
Senecio triangularis	F	–	46, 4	–	–	–	–	–	–
Lupinus lepidus	F	–	–	71, 3	–	–	–	–	–
Micranthes spp.	F	–	–	71, 1	–	–	–	–	–
Phacelia sericea	F	21, 0.1	–	71, 2	–	–	–	–	–
Solidago multiradiata	F	29, 1	–	71, 2	14, 0.1	10, 1	–	17, 4	–
Agoseris spp.	F	–	–	43, 2	14, 0.1	38, 1	33, 0.1	17, 1	–

Abbrev (Plot Count)		ARTLUD- LOMMAR (14)	CHALAT- OXYDIG- (VALSIT) (12)	DASFRU- (PHLDIF) (7)	ELMRAC (7)	EUCPAU- (PHAHAS- CASMIN) (21)	LUIHYP- (LOMMAR- CASPAR) (3)	PHLDIF- (LOMMAR) (12)	LEWCOL- (JUNPAR) (4)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Anemone drummondii var. drummondii	F	–	–	57, 1	–	–	–	–	–
Silene acaulis	F	–	–	57, 3	–	–	–	–	–
Smelowskia americana	F	–	–	57, 2	–	–	–	–	–
Elmera racemosa	F	–	23, 1	–	100, 6	14, 3	–	–	–
Phacelia hastata	F	–	–	–	43, 1	81, 2	–	42, 4	–
Luetkea pectinata	F	–	38, 2	–	43, 2	10, 2	–	–	–
Lupinus latifolius	F	7, 3	–	–	–	76, 7	67, 4	67, 3	–
Castilleja miniata	F	36, 1	–	14, 1	14, 0.1	67, 4	–	33, 4	25, 0.1
Hieracium albiflorum	F	–	–	–	–	43, 0.1	33, 1	–	–
Silene parryi	F	29, 2	–	14, 1	–	48, 2	33, 2	33, 4	–
Luina hypoleuca	F	7, 3	–	–	–	5, 1	100, 10	–	–
Castilleja parviflora	F	–	–	–	–	–	67, 5	–	–
Lewisia columbiana	F	–	–	–	–	–	–	–	100, 5
Eremogone capillaris var. americana	F	–	8, 0.1	29, 1	–	10, 2	–	8, 3	75, 0.1
Lomatium brandegeei	F	–	8, 0.1	–	–	–	–	–	75, 1
Montia parvifolia	F	–	8, 1	–	–	–	–	–	75, 1
Penstemon serrulatus	F	–	8, 0.1	–	–	5, 0.1	–	8, 3	50, 0.1
Polygonum douglasii	F	–	–	–	–	–	–	–	50, 0.1
Sedum divergens	F	36, 1	23, 0.1	14, 1	14, 0.1	29, 0.1	–	8, 3	50, 2
Sedum lanceolatum	F	–	8, 0.1	14, 0.1	–	–	–	–	50, 0.1
Carex phaeocephala	Gr	7, 0.1	–	43, 1	–	5, 3	–	–	–
Juncus parryi	Gr	–	38, 0.1	14, 0.1	14, 0.1	14, 2	33, 0.1	17, 4	100, 2
Elymus elymoides	G	64, 0.1	–	43, 1	–	–	–	8, 0.1	–
Poa secunda	G	50, 1	–	–	–	–	–	8, 3	50, 1

Abbrev (Plot Count)		ARTLUD- LOMMAR (14)	CHALAT- OXYDIG- (VALSIT) (12)	DASFRU- (PHLDIF) (7)	ELMRAC (7)	EUCPAU- (PHAHAS- CASMIN) (21)	LUIHYP- (LOMMAR- CASPAR) (3)	PHLDIF- (LOMMAR) (12)	LEWCOL- (JUNPAR) (4)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Festuca roemerii	G	–	–	43, 2	–	14, 14	–	8, 10	–
Danthonia intermedia	G	–	–	–	–	–	–	8, 10	75, 0.1
Festuca viridula	G	–	–	–	–	–	–	8, 6	50, 3
Undifferentiated Moss	M	7, 3	46, 4	14, 2	43, 2	–	–	33, 14	100, 10

G320 North Pacific Alpine-Subalpine Tundra

**Table A-32.** Synoptic table for G320 North Pacific Alpine-Subalpine Tundra.

Alliance		A1300 Carex spectabilis Subalpine Meadow	A1640 Antennaria lanata - Juncus parryi Alpine Meadow		A3336 Eriogonum spp. - Luzula spp. Alpine Snowbed			A3337 Festuca roemerii - Festuca saximontana Alpine Meadow	A3338 Minuartia obtusiloba - Lupinus sellulus var. lobbii Cascade Alpine Fell-field
Abbrev (Plot Count)		CARSPE-POLBIS (68)	ANTLAN (15)	JUNPAR-(POLBIS) (8)	ERIPYR-POLDAV (8)	LUEPEC-SAXTOL (30)	SAXTOL-LUZPIP (42)	FESROE-PHLDIF-ARECAP (13)	PHLDIF-LUPSEL-(PEDCON) (7)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Abies lasiocarpa ssp. lasiocarpa (understory)	CT	43, 2	33, 0.1	25, 2	–	47, 1	12, 0.1	15, 1	29, 1
Dasiphora fruticosa	S	1, 0.1	–	–	–	–	–	–	43, 4
Vaccinium deliciosum	SS	55, 5	67, 15	38, 4	–	33, 1	21, 1	15, 3	–
Phyllodoce empetriformis	SS	39, 4	40, 2	38, 0.1	25, 1	87, 5	86, 3	–	14, 1
Juniperus communis	SS	3, 1	7, 0.1	50, 2	–	3, 0.1	2, 0.1	69, 2	14, 1
Cassiope mertensiana	SS	6, 1	33, 4	–	–	73, 1	69, 2	–	–
Lupinus latifolius	F	91, 19	47, 5	75, 5	12, 0.1	17, 5	2, 0.1	31, 5	–
Bistorta bistortoides	F	70, 10	60, 6	100, 6	–	3, 0.1	5, 0.1	23, 6	–
Potentilla flabellifolia	F	52, 4	67, 10	25, 2	–	13, 1	2, 1	–	29, 1
Erigeron glacialis var. glacialis	F	52, 4	20, 4	25, 2	–	30, 0.1	7, 1	15, 3	–
Antennaria lanata	F	13, 3	93, 15	38, 6	38, 1	17, 0.1	–	15, 2	14, 0.1
Oreostemma alpigenum	F	4, 3	67, 12	12, 2	25, 2	3, 0.1	–	8, 3	86, 6
Luetkea pectinata	F	37, 5	47, 3	75, 4	12, 5	97, 13	95, 3	–	–

Abbrev (Plot Count)		CARSPE-POLBIS (68)	ANTLAN (15)	JUNPAR-(POLBIS) (8)	ERIPYR-POLDAV (8)	LUEPEC-SAXTOL (30)	SAXTOL-LUZPIP (42)	FESROE-PHLDIF-ARECAP (13)	PHLDIF-LUPSEL-(PEDCON) (7)
Species (Strata)	Specific Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Phlox diffusa	F	19, 3	27, 2	88, 6	–	10, 5	2, 0.1	92, 14	100, 17
Hieracium triste	F	25, 1	20, 6	62, 2	12, 0.1	40, 0.1	26, 0.1	–	–
Eremogone capillaris var. americana	F	6, 2	33, 2	62, 2	12, 0.1	3, 0.1	–	92, 10	14, 1
Aconogonon davisiae	F	1, 1	7, 3	–	88, 7	–	5, 1	–	29, 1
Eriogonum pyrolifolium	F	–	–	–	100, 8	7, 1	2, 0.1	–	14, 0.1
Micranthes tolmiei	F	1, 1	–	–	50, 2	33, 1	98, 5	–	–
Achillea millefolium	F	21, 2	7, 10	25, 1	–	3, 0.1	2, 0.1	62, 2	43, 3
Lomatium martindalei	F	4, 1	7, 0.1	38, 0.1	–	–	2, 0.1	46, 3	–
Pedicularis contorta	F	1, 1	13, 5	–	–	–	–	–	86, 3
Lupinus lepidus	F	–	–	–	25, 0.1	7, 4	–	15, 10	100, 12
Artemisia furcata	F	–	–	–	–	–	–	–	57, 5
Veronica cusickii	F	19, 3	27, 4	12, 0.1	–	27, 0.1	5, 1	–	43, 0.1
Carex spectabilis	Gr	97, 38	53, 12	88, 9	75, 2	67, 5	45, 2	15, 4	57, 4
Juncus parryi	Gr	21, 3	40, 6	100, 19	38, 2	63, 2	71, 1	31, 6	–
Luzula piperi	Gr	1, 5	13, 3	–	38, 1	60, 1	86, 3	8, 0.1	–
Carex nigricans	Gr	7, 2	20, 1	12, 2	12, 0.1	37, 3	67, 6	–	–
Festuca roemerii	G	3, 4	7, 0.1	62, 5	–	–	–	92, 15	–
Undifferentiated Moss	M	10, 11	27, 4	62, 4	–	40, 5	76, 9	31, 8	–



## Section B: Synoptic tables for wetland alliances of Mount Rainier, North Cascades, and Olympic National Parks

These tables include floristic cover data for all wetland alliances included in Section B of Ramm-Granberg et. al (2021). The tables below show species that have  $\geq 20\%$  constancy in at least one of the alliances being compared. Note that these tables include data from across Washington, including many plots outside of the NCCN parks.

Differential species were identified with Indicator Species Analysis (% of perfect indication  $\geq 20\%$  and p-value  $< 0.05$  compared to other alliances documented in the group). Indicator values are relative to all alliances documented within that group in the statewide Washington data set, not just those that occur, or are thought to occur, in the national parks.

- Indicator Values: \*\*\* Strong differential = Indicator Value  $\geq 60\%$ , \*\* Moderate differential = Indicator Value 40-59%, \*Weak differential = Indicator Value  $\geq 20\%$
- Dominance: mean cover values  $\geq 10\%$  mean cover are in **bold**
- Constancy: orange highlight = constancy 20-39%; blue highlight = constancy 40-60%; green highlight = constancy  $\geq 60\%$

For all tables in Section B, Specific Growth Form codes are: H = Herb, NV = Nonvascular, OT = Overstory Tree, S = Shrub, and UT = Understory Tree.

### 1.B.3.Nc Rocky Mountain-Great Basin Montane Flooded & Swamp Forest

#### M034 Rocky Mountain-Great Basin Montane Riparian & Swamp Forest

##### G505 Rocky Mountain-Great Basin Swamp Forest

**Table B-1.** Synoptic table for alliances in G505 Rocky Mountain-Great Basin Swamp Forest. A4431 Populus tremuloides - Betula papyrifera Swamp Forest has not been documented in the NCCN parks and is not likely to occur there. It was excluded from this table.

Alliance Code		A3775	A3776
Alliance (Plot Count)		Picea engelmannii Swamp Forest (76)	Thuja plicata - Tsuga heterophylla Rocky Mountain Swamp Forest (59)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover
Picea engelmannii	OT	99, 29***	34, 13
Abies lasiocarpa	OT	62, 12**	14, 7
Pinus contorta	OT	24, 14	2, 0.1
Thuja plicata	OT	14, 16	97, 37***
Tsuga heterophylla	OT	12, 14	63, 20**
Pseudotsuga menziesii	OT	7, 15	37, 11
Abies grandis	OT	1, 20	48, 11**
Picea engelmannii	UT	74, 5***	10, 3
Abies lasiocarpa	UT	58, 7**	3, 2
Thuja plicata	UT	17, 6	90, 7***
Tsuga heterophylla	UT	16, 3	53, 5**
Abies grandis	UT	3, 4	32, 2**
Rhododendron columbianum	S	29, 13*	0, 0
Vaccinium scoparium	S	25, 10*	0, 0
Alnus incana ssp. tenuifolia	S	34, 10	22, 4
Ribes lacustre	S	26, 4	53, 1
Lonicera involucrata var. involucrata	S	26, 4	8, 1
Cornus stolonifera	S	16, 7	27, 11
Oplopanax horridus	S	12, 7	83, 20***
Rubus nutkanus	S	9, 11	46, 3
Paxistima myrsinites	S	8, 3	20, 1
Acer glabrum var. douglasii	S	7, 9	27, 4
Rosa gymnocarpa	S	7, 2	24, 1
Acer circinatum	S	4, 3	22, 20*
Carex scopulorum	H	54, 36**	0, 0
Senecio triangularis	H	41, 2*	22, 1
Cornus (canadensis, unalaschensis)	H	36, 4*	8, 2

Alliance Code		A3775	A3776
Alliance (Plot Count)		Picea engelmannii Swamp Forest (76)	Thuja plicata - Tsuga heterophylla Rocky Mountain Swamp Forest (59)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover
Valeriana sitchensis	H	20, 11*	0, 0
Equisetum arvense	H	42, 18	19, 6
Calamagrostis canadensis	H	34, 9	2, 1
Linnaea borealis ssp. longiflora	H	33, 4	44, 3
Streptopus amplexifolius	H	33, 1	44, 2
Athyrium filix-femina ssp. cyclosum	H	29, 5	86, 14***
Tiarella trifoliata	H	25, 2	78, 5**
Maianthemum stellatum	H	25, 2	54, 5
Carex disperma	H	25, 11	8, 2
Pyrola asarifolia	H	21, 2	20, 2
Pectiantia pentandra	H	20, 5	8, 1
Galium triflorum	H	17, 1	49, 1
Cinna latifolia	H	13, 2	24, 1
Viola glabella	H	12, 2	41, 2*
Adenocaulon bicolor	H	8, 1	34, 1
Gymnocarpium dryopteris	H	7, 5	78, 6***
Clintonia uniflora	H	7, 2	64, 2**
Actaea rubra	H	7, 2	41, 2*
Circaea alpina	H	4, 2	44, 2*
Prosartes hookeri	H	3, 1	24, 3
Asarum caudatum	H	1, 1	54, 5**
Trillium ovatum	H	0, 0	32, 1*
Goodyera oblongifolia	H	0, 0	20, 1*

G506 Rocky Mountain-Great Basin Montane Riparian Forest

**Table B-2.** Synoptic table for alliances in G506 Rocky Mountain-Great Basin Montane Riparian Forest. A3757 *Abies lasiocarpa* - *Picea engelmannii* Riparian Forest, A3762 *Abies grandis* Rocky Mountain Riparian Forest, A3758 *Pinus contorta* var. *murrayana* - *Pinus contorta* var. *latifolia* Swamp Forest Alliance, A3759 *Populus angustifolia* Riparian Forest Alliance, A3761 *Picea pungens* Riparian Forest Alliance, A3797 *Pinus ponderosa* - *Juniperus scopulorum* - *Abies concolor* Riparian Woodland Alliance, and A4154 *Acer negundo* - *Alnus incana* ssp. *tenuifolia* - *Cornus sericea* Riparian Woodland have not been documented in the NCCN parks and are not likely to occur there. These were excluded from this table.

Alliance Code		A3760	A4432
Alliance (Plot Count)		Populus tremuloides Riparian Forest (35)	Thuja plicata - Tsuga heterophylla Rocky Mountain Riparian Forest (48)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover
Populus tremuloides	OT	<b>100, 51***</b>	0, 0
Pseudotsuga menziesii	OT	26, 7	<b>48, 18</b>
Populus trichocarpa	OT	<b>20, 11</b>	<b>10, 16</b>
Abies grandis	OT	<b>14, 15</b>	38, 9
Thuja plicata	OT	3, 8	<b>94, 33***</b>
Picea engelmannii	OT	3, 0.1	<b>29, 14</b>
Tsuga heterophylla	OT	0, 0	<b>33, 20*</b>
Populus tremuloides	UT	<b>63, 17***</b>	0, 0
Pseudotsuga menziesii	UT	26, 5	6, 2
Abies grandis	UT	20, 1	38, 3
Thuja plicata	UT	11, 4	<b>81, 9***</b>
Picea engelmannii	UT	11, 5	25, 2
Tsuga heterophylla	UT	0, 0	38*, 5
Taxus brevifolia	UT	0, 0	21, 9
Symphoricarpos albus	S	<b>94, 38**</b>	23, 2
Cornus stolonifera	S	<b>63, 37*</b>	38, 8
Rosa nutkana	S	<b>49, 17*</b>	4, 2
Alnus incana ssp. tenuifolia	S	<b>46, 16</b>	<b>31, 31</b>
Amelanchier alnifolia	S	43, 5	23, 2
Rubus nutkanus	S	37, 4	40, 4
Acer glabrum var. douglasii	S	<b>31, 23</b>	38, 7
Ribes lacustre	S	26, 7	35, 5
Salix scouleriana	S	<b>26, 13</b>	6, 3
Paxistima myrsinites	S	<b>20, 18</b>	<b>48, 11</b>
Rosa gymnocarpa	S	20, 5	48, 2
Acer circinatum	S	<b>3, 50</b>	<b>48, 31**</b>
Mahonia nervosa	S	0, 0	25, 5
Vaccinium membranaceum	S	0, 0	23, 9

Alliance Code		A3760	A4432
Alliance (Plot Count)		Populus tremuloides Riparian Forest (35)	Thuja plicata - Tsuga heterophylla Rocky Mountain Riparian Forest (48)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover
<i>Maianthemum stellatum</i>	H	54, 3*	35, 4
<i>Thalictrum occidentale</i>	H	29, 4	4, 1
<i>Elymus glaucus</i>	H	26, 3	6, 1
<i>Linnaea borealis</i> ssp. <i>longiflora</i>	H	20, 8	42, 9
<i>Actaea rubra</i>	H	20, 2	17, 1
<i>Geum macrophyllum</i>	H	20, 1	10, 2
<i>Circaea alpina</i>	H	20, 3	<b>8, 12</b>
<i>Taraxacum officinale</i>	H	20, 1	0, 0
<i>Equisetum arvense</i>	H	17, 1	25, 7
<i>Galium triflorum</i>	H	14, 2	33, 1
<i>Pyrola asarifolia</i>	H	14, 4	21, 3
<i>Athyrium filix-femina</i> ssp. <i>cyclosorum</i>	H	11, 2	27, 6
<i>Maianthemum racemosum</i> ssp. <i>amplexicaule</i>	H	11, 2	23, 2
<i>Streptopus amplexifolius</i>	H	9, 1	25, 2
<i>Tiarella trifoliata</i>	H	6, 2	35, 3
<i>Trillium ovatum</i>	H	6, 2	27, 2
<i>Chimaphila umbellata</i> ssp. <i>umbellata</i>	H	6, 2	23, 2
<i>Cornus</i> ( <i>canadensis</i> , <i>unalaschkensis</i> )	H	6, 1	21, 7
<i>Gymnocarpium dryopteris</i>	H	3, 3	33, 8
<i>Pteridium aquilinum</i> ssp. <i>pubescens</i>	H	3, 1	31, 4
<i>Orthilia secunda</i>	H	3, 1	23, 2
<i>Clintonia uniflora</i>	H	0, 0	44, 3*
<i>Goodyera oblongifolia</i>	H	0, 0	35, 2*
<i>Achlys triphylla</i>	H	0, 0	<b>23, 13</b>

G796 Northern Rocky Mountain Lowland & Foothill Riparian Forest

**Table B-3.** Synoptic table for alliances in G796 Northern Rocky Mountain Lowland & Foothill Riparian Forest.

Alliance Code		A0311	A4429
Alliance		Populus balsamifera ssp. trichocarpa Northern Rocky Mountain Riparian Forest (84)	Alnus rhombifolia - Alnus rubra Interior Swamp & Riparian Forest (16)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover
Populus trichocarpa	OT	<b>100, 35***</b>	0, 0
Pseudotsuga menziesii	OT	29, 7	<b>50, 28</b>
Thuja plicata	OT	23, 6*	0, 0
Picea engelmannii	OT	20, 7	0, 0
Alnus rubra	OT	<b>7, 11</b>	<b>44, 56</b>
Populus trichocarpa	UT	42, 4***	0, 0
Thuja plicata	UT	25, 3*	0, 0
Pseudotsuga menziesii	UT	21, 5	38, 2
Cornus stolonifera	S	<b>67, 31</b>	<b>44, 46</b>
Alnus incana ssp. tenuifolia	S	<b>51, 34**</b>	<b>6, 55</b>
Symphoricarpos albus	S	<b>46, 26</b>	<b>81, 22**</b>
Rubus nutkanus	S	44, 5	<b>62, 10**</b>
Acer glabrum var. douglasii	S	37, 9	<b>62, 18**</b>
Ribes lacustre	S	36, 5	44, 6
Rosa nutkana	S	29, 8	19, 3
Amelanchier alnifolia	S	27, 3	31, 3
Alnus viridis ssp. sinuata	S	<b>24, 15</b>	<b>6, 45</b>
Paxistima myrsinites	S	18, 3	31, 3
Holodiscus discolor	S	10, 8	25, 2
Frangula purshiana ssp. purshiana	S	5, 2	25, 5*
Physocarpus capitatus	S	0, 0	<b>31, 22*</b>
Maianthemum stellatum	H	42, 7	<b>38, 11</b>
Athyrium filix-femina ssp. cyclosorum	H	27, 6	44, 9
Equisetum arvense	H	23, 6	0, 0
Elymus glaucus	H	21, 3	31, 3
Galium triflorum	H	19, 2	50, 1*
Circaea alpina	H	18, 2	38, 3*
Viola glabella	H	15, 2	31, 5*
Asarum caudatum	H	13, 2	38, 7*
Urtica dioica	H	10, 1	31, 1*
Tiarella trifoliata	H	7, 2	<b>25, 11*</b>
Streptopus amplexifolius	H	6, 2	44, 3**
Gymnocarpium dryopteris	H	6, 3	31, 5*

Alliance Code		A0311	A4429
Alliance		Populus balsamifera ssp. trichocarpa Northern Rocky Mountain Riparian Forest (84)	Alnus rhombifolia - Alnus rubra Interior Swamp & Riparian Forest (16)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover
Polystichum munitum	H	5, 0.1	38, 0.1*
Osmorhiza berteroi	H	2, 1	31, 2*
Carex leptopoda	H	1, 0.1	25, 7*
Melica Sulata	H	0, 0	<b>31, 10*</b>

### 1.B.3.Ng Vancouverian Flooded & Swamp Forest

#### ***M035 Vancouverian Flooded & Swamp Forest***

#### G507 North-Central Pacific Montane Riparian & Seepage Swamp Forest

**Table B-4.** Synoptic table for alliances in G507 North-Central Pacific Montane Riparian & Seepage Swamp Forest. A3767 Picea engelmannii Cascadian Swamp Woodland Alliance has not been documented in the NCCN parks and is not likely to occur there. It was excluded from this table.

Alliance Code		A3766
Alliance (Plot Count)		Tsuga (mertensiana, heterophylla) - Abies amabilis Riparian & Swamp Forest (104)
Species	General Growth Form	Const (%), Mean Cover
Abies amabilis	OT	<b>89, 20***</b>
Tsuga heterophylla	OT	<b>76, 22***</b>
Thuja plicata	OT	<b>40, 11</b>
Abies amabilis	UT	80, 8***
Tsuga heterophylla	UT	66, 6**
Thuja plicata	UT	26, 3
Rubus spectabilis	S	<b>74, 14**</b>
Oplopanax horridus	S	<b>73, 19**</b>
Vaccinium ovalifolium	S	<b>55, 11</b>
Vaccinium membranaceum	S	40, 6**
Sambucus racemosa	S	33, 3
Acer circinatum	S	<b>32, 12</b>
Vaccinium parvifolium	S	32, 2
Rubus nutkanus	S	24, 4
Ribes lacustre	S	24, 2
Rhododendron menziesii	S	24, 5
Alnus viridis ssp. sinuata	S	<b>22, 23</b>
Athyrium filix-femina ssp. cyclosorum	H	<b>78, 10</b>
Gymnocarpium dryopteris	H	<b>72, 11**</b>

Alliance Code		A3766
Alliance (Plot Count)		Tsuga (mertensiana, heterophylla) - Abies amabilis Riparian & Swamp Forest (104)
Species	General Growth Form	Const (%), Mean Cover
Polystichum munitum	H	25, 2
Struthiopteris spicant	H	24, 3
Tiarella trifoliata	H	78, 7**
Clintonia uniflora	H	63, 4**
Rubus pedatus	H	51, 4**
Streptopus lanceolatus	H	40, 4**
Viola glabella	H	33, 3
Cornus (canadensis, unalaschkensis)	H	33, 5
Achlys triphylla	H	32, 9
Rubus lasiococcus	H	30, 3
Maianthemum stellatum	H	28, 4
Trillium ovatum	H	27, 1
Streptopus amplexifolius	H	24, 2
Galium triflorum	H	20, 1
Orthilia secunda	H	20, 2
Undifferentiated Moss	NV	<b>39, 25</b>



G851 North-Central Pacific Lowland Riparian Forest

**Table B-5.** Synoptic table for alliances in G851 North-Central Pacific Lowland Riparian Forest. A3748 Salix lucida Riparian Scrub has not been documented in the NCCN parks and is not likely to occur there. It was excluded from this table.

Alliance Code		A3746	A4428	A4430
Alliance (Plot Count)		Picea sitchensis - Tsuga heterophylla - Alnus rubra Riparian Forest (17)	Populus balsamifera ssp. trichocarpa - Alnus rubra - Fraxinus latifolia Riparian Forest (251)	Alnus rubra - Acer macrophyllum - Alnus viridis Lower Montane Riparian & Swamp Forest (24)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Alnus rubra	OT	<b>65, 20</b>	<b>91, 44</b>	<b>58, 55</b>
Picea sitchensis	OT	<b>59, 17*</b>	<b>36, 11</b>	0, 0
Tsuga heterophylla	OT	53, 8*	45, 7	12, 4
Populus trichocarpa	OT	<b>24, 19</b>	<b>26, 18</b>	8, 4
Acer macrophyllum	OT	<b>18, 10</b>	<b>44, 30</b>	<b>38, 56</b>
Thuja plicata	OT	12, 2	23, 5	<b>12, 10</b>
Pseudotsuga menziesii	OT	12, 3	16, 8	25, 7*
Alnus rubra	UT	<b>47, 38</b>	33, 7	<b>29, 22</b>
Tsuga heterophylla	UT	<b>47, 12*</b>	24, 4	17, 4
Pseudotsuga menziesii	UT	29, 1	6, 2	29, 6*
Picea sitchensis	UT	24, 6*	16, 4	0, 0
Acer macrophyllum	UT	18, 4	19, 6	33, 5
Thuja plicata	UT	12, 4	18, 2	33, 4
Abies grandis	UT	6, 2	9, 2	25, 4*
Rubus spectabilis	S	<b>76, 27</b>	<b>86, 22**</b>	25, 9
Sambucus racemosa	S	41, 7	35, 7	17, 2
Rubus nutkanus	S	24, 1	24, 3	<b>25, 15</b>
Acer circinatum	S	18, 5	<b>49, 16</b>	<b>38, 30</b>
Ribes bracteosum	S	12, 1	25, 6	12, 2
Vaccinium parvifolium	S	12, 3	22, 1	4, 1
Oplopanax horridus	S	12, 1	21, 8	<b>25, 14</b>
Ribes lacustre	S	12, 1	16, 4	21, 2
Alnus viridis ssp. sinuata	S	12, 2	2, 5	<b>42, 22*</b>
Rubus ursinus	S	6, 1	28, 6*	0, 0
Symphoricarpos albus	S	6, 2	14, 8	<b>25, 23</b>
Acer glabrum var. douglasii	S	6, 1	3, 3	21, 5
Holodiscus discolor	S	0, 0	2, 5	38, 7*
Cornus stolonifera	S	0, 0	<b>2, 21</b>	<b>29, 25*</b>
Paxistima myrsinites	S	0, 0	1, 1	21, 5*

Alliance Code		A3746	A4428	A4430
Alliance (Plot Count)		Picea sitchensis - Tsuga heterophylla - Alnus rubra Riparian Forest (17)	Populus balsamifera ssp. trichocarpa - Alnus rubra - Fraxinus latifolia Riparian Forest (251)	Alnus rubra - Acer macrophyllum - Alnus viridis Lower Montane Riparian & Swamp Forest (24)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Polystichum munitum	H	<b>65, 28</b>	<b>80, 16</b>	25, 1
Athyrium filix-femina ssp. cyclosorum	H	47, 6	68, 6	<b>29, 23</b>
Claytonia sibirica	H	29, 1	<b>65, 5**</b>	4, 3
Stachys cooleyae	H	29, 2	48, 6	<b>8, 18</b>
Galium triflorum	H	24, 1	36, 2	17, 1
Struthiopteris spicant	H	24, 6	22, 1	0, 0
Maianthemum dilatatum	H	24, 5	9, 2	0, 0
Tolmiea menziesii	H	<b>18, 20</b>	<b>68, 13**</b>	8, 1
Circaea alpina	H	18, 5	54, 6	<b>29, 22</b>
Oxalis oregana	H	<b>18, 33</b>	<b>48, 22*</b>	<b>4, 25</b>
Polypodium glycyrrhiza	H	18, 1	24, 1	0, 0
Dryopteris expansa	H	18, 1	20, 2	4, 0.1
Anaphalis margaritacea	H	18, 0.1	4, 1	21, 1
Carex leptopoda	H	12, 2	30, 4	4, 1
Ranunculus repens	H	12, 2	<b>26, 12</b>	0, 0
Galium aparine	H	12, 1	23, 3	4, 2
Viola glabella	H	6, 3	34, 3	25, 2
Tiarella trifoliata	H	6, 5	31, 3	0, 0
Mycelis muralis	H	6, 0.1	28, 1	4, 0.1
Luzula parviflora	H	6, 2	24, 1	0, 0
Bromus vulgaris	H	0, 0	22, 5*	0, 0
Maianthemum racemosum ssp. amplexicaule	H	0, 0	2, 1	25, 2*
Undifferentiated Moss	NV	<b>24, 10</b>	<b>22, 10</b>	<b>12, 14</b>

G853 North-Central Pacific Maritime Swamp Forest

**Table B-6.** Synoptic table for alliances in G853 North-Central Pacific Maritime Swamp Forest. A3755 Pinus contorta Swamp Forest has not been documented in the NCCN parks and is not likely to occur there. It was excluded from this table.

Alliance Code		A3753	A4285
Alliance (Plot Count)		Alnus rubra - Fraxinus latifolia / Lysichiton americanus Swamp Woodland (61)	Tsuga heterophylla - Picea sitchensis / Lysichiton americanus Swamp Forest (128)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover
Alnus rubra	OT	<b>92, 58**</b>	<b>41, 21</b>
Tsuga heterophylla	OT	41, 5	<b>94, 24***</b>
Picea sitchensis	OT	33, 9	<b>68, 17</b>
Thuja plicata	OT	24, 6	<b>65, 20*</b>
Alnus rubra	UT	26, 8	5, 3
Tsuga heterophylla	UT	15, 3	<b>20, 10</b>
Rubus spectabilis	S	<b>77, 18</b>	<b>71, 11</b>
Vaccinium parvifolium	S	<b>28, 10</b>	59, 3
Spiraea douglasii	S	<b>26, 18</b>	18, 9
Vaccinium ovalifolium	S	25, 2	40, 6
Acer circinatum	S	<b>23, 10</b>	<b>14, 17</b>
Ribes bracteosum	S	<b>21, 10</b>	15, 4
Malus fusca	S	20, 4	<b>36, 12</b>
Sambucus racemosa	S	20, 2	16, 2
Frangula purshiana ssp. purshiana	S	18, 2	36, 6
Gaultheria shallon	S	13, 5	<b>70, 22***</b>
Rhododendron menziesii	S	13, 2	<b>62, 3*</b>
Oplopanax horridus	S	13, 7	<b>23, 21</b>
Vaccinium ovatum	S	0, 0	<b>20, 22</b>
Athyrium filix-femina ssp. cyclosorum	H	<b>89, 9</b>	62, 5
Lysichiton americanus	H	<b>75, 25</b>	<b>80, 20</b>
Oenanthe sarmentosa	H	<b>51, 13</b>	25, 8
Stachys cooleyae	H	46, 4	15, 4
Tolmiea menziesii	H	<b>44, 15</b>	15, 8
Maianthemum dilatatum	H	39, 2	42, 3
Viola glabella	H	38, 3	13, 4
Struthiopteris spicant	H	36, 2	<b>73, 7**</b>
Tiarella trifoliata	H	36, 3	32, 6
Polystichum munitum	H	36, 4	<b>30, 14</b>

Alliance Code		A3753	A4285
Alliance (Plot Count)		Alnus rubra - Fraxinus latifolia / Lysichiton americanus Swamp Woodland (61)	Tsuga heterophylla - Picea sitchensis / Lysichiton americanus Swamp Forest (128)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover
Veronica americana	H	33, 2	5, 2
Galium triflorum	H	31, 2	22, 2
Claytonia sibirica	H	31, 3	17, 2
Scirpus microcarpus	H	<b>31, 14</b>	8, 8
Oxalis oregana	H	<b>28, 14</b>	<b>19, 33</b>
Circaea alpina	H	28, 2	12, 3
Glyceria elata	H	<b>28, 12</b>	7, 7
Carex obnupta	H	<b>26, 29</b>	<b>36, 28</b>
Cardamine angulata	H	23, 3	10, 2
Viola palustris	H	23, 4	6, 3
Chrysosplenium glechomaefolium	H	<b>21, 29</b>	<b>8, 16</b>
Carex leptopoda	H	21, 2	6, 5
Equisetum telmateia ssp. braunii	H	21, 2	5, 1
Luzula parviflora	H	20, 1	20, 1
Pectiantia ovalis	H	20, 6	13, 6
Polypodium glycyrrhiza	H	20, 1	10, 1
Angelica genuflexa	H	20, 6	2, 5
Cornus (canadensis, unalaschensis)	H	10, 2	33, 3
Sphagnum spp.	NV	3, 1	29, 7

**MNEW001 Vancouverian Ruderal Flooded & Swamp Forest [Provisional]**

GNEW01 Vancouverian Ruderal Flooded & Swamp Forest [Provisional]

**Table B-7.** Synoptic table for alliances in GNEW01 Vancouverian Ruderal Flooded & Swamp Forest [Provisional]. No indicator species analysis conducted for this group (only one current provisional alliance).

Alliance Code		ANEW001
Alliance (Plot Count)		Alnus rubra / Dactylis glomerata Ruderal Flooded Forest [Provisional] (5)
Species	General Growth Form	Const (%), Mean Cover
Acer macrophyllum	OT	60, 5
Alnus rubra	OT	<b>60, 40</b>
Picea sitchensis	OT	60, 3
Thuja plicata	OT	20, 1
Tsuga heterophylla	OT	20, 1
Alnus rubra	UT	<b>80, 12</b>
Picea sitchensis	UT	60, 8
Thuja plicata	UT	40, 2
Populus trichocarpa	UT	20, 3
Pseudotsuga menziesii	UT	20, 8
Tsuga heterophylla	UT	20, 3
Acer circinatum	S	40, 2
Rubus spectabilis	S	40, 4
Salix spp.	S	<b>40, 12</b>
Salix sitchensis	S	<b>40, 22</b>
Rubus ursinus	S	20, 1
Vaccinium ovalifolium	S	20, 0.1
Vaccinium ovalifolium	S	20, 0.1
Agrostis spp.	H	<b>60, 16</b>
Plantago lanceolata	H	60, 8
Trifolium repens	H	60, 1
Circaea alpina	H	40, 2
Hypochaeris radicata	H	40, 4
Oxalis oregana	H	40, 4
Polystichum munitum	H	40, 3
Prunella vulgaris	H	40, 1
Ranunculus repens	H	<b>40, 22</b>
Rumex occidentalis	H	40, 6
Stachys cooleyae	H	40, 4
Achillea millefolium	H	20, 8

Alliance Code		ANEW001
Alliance (Plot Count)		Alnus rubra / Dactylis glomerata Ruderal Flooded Forest [Provisional] (5)
Species	General Growth Form	Const (%), Mean Cover
Anthoxanthum odoratum	H	<b>20, 13</b>
Cirsium arvense	H	20, 2
Claytonia sibirica	H	20, 1
Unidentified F	H	20, 2
Fragaria virginiana ssp. glauca	H	20, 3
Galium aparine	H	20, 0.1
Unidentified G	H	<b>20, 20</b>
Holcus lanatus	H	20, 1
Leontodon saxatilis ssp. saxatilis	H	20, 1
Maianthemum dilatatum	H	20, 1
Poa spp.	H	<b>20, 28</b>
Poa pratensis	H	<b>20, 82</b>
Rumex acetosella	H	20, 2
Tolmiea menziesii	H	20, 3
Trifolium dubium	H	20, 1
Undifferentiated Moss	NV	<b>40, 15</b>
Undifferentiated Lichen	NV	20, 1

## 2.C.2.Na North American Bog & Fen

### M063 North Pacific Bog & Fen

#### G284 North Pacific Acidic Open Bog & Fen

**Table B-8.** Synoptic table for alliances in G284 North Pacific Acidic Open Bog & Fen. A4410 Ledum Glandulosum - Darlingtonia californica Shrub & Open Fen Alliance has not been documented in the NCCN parks and is not likely to occur there. It was excluded from this table.

Alliance Code		A4409	A4411	A4412
Alliance (Plot Count)		Ledum groenlandicum - Kalmia microphylla - Rhynchospora alba Shrub & Open Bog (151)	Myrica gale - Carex utriculata - Sphagnum spp. Acidic Shrub & Open Fen (167)	Kalmia microphylla - Caltha leptosepala - Sphagnum spp. Montane Acidic Shrub & Open Fen (39)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Tsuga heterophylla	OT	44, 5	13, 3	0, 0
Thuja plicata	OT	30, 5	20, 4	0, 0
Picea sitchensis	OT	21, 3	10, 1	0, 0
Rhododendron groenlandicum	S	<b>95, 36***</b>	<b>35, 11</b>	3, 8
Kalmia microphylla	S	<b>86, 26**</b>	28, 6	<b>44, 18</b>
Vaccinium oxycoccos	S	<b>75, 14**</b>	24, 8	<b>18, 19</b>
Gaultheria shallon	S	<b>46, 10*</b>	<b>7, 11</b>	0, 0
Spiraea douglasii	S	29, 5	<b>43, 44*</b>	23, 7
Myrica gale	S	1, 2	<b>40, 56**</b>	0, 0
Pteridium aquilinum ssp. pubescens	H	<b>44, 13**</b>	7, 2	0, 0
Drosera rotundifolia	H	<b>42, 3*</b>	20, 2	26, 1
Eriophorum chamissonis	H	34, 8*	8, 3	0, 0
Carex utriculata	H	<b>30, 14</b>	<b>49, 20</b>	<b>44, 41</b>
Rhynchospora alba	H	<b>29, 25*</b>	<b>18, 10</b>	0, 0
Lysichiton americanus	H	26, 3	19, 9	21, 3
Sanguisorba officinalis	H	<b>23, 11</b>	<b>46, 22*</b>	0, 0
Lysimachia europaea	H	23, 2	23, 4	28, 4
Carex aquatilis var. dives	H	17, 7	<b>44, 28*</b>	<b>31, 15</b>
Gentiana sceptrum	H	17, 2	32, 5*	0, 0
Carex echinata ssp. echinata	H	16, 4	17, 8	36, 3*
Carex obnupta	H	<b>15, 17</b>	<b>21, 16</b>	0, 0
Carex livida	H	14, 7	<b>25, 19</b>	0, 0
Triantha occidentalis ssp. brevistyla	H	11, 2	3, 1	44, 2*
Comarum palustre	H	9, 4	<b>16, 11</b>	<b>33, 12*</b>
Menyanthes trifoliata	H	7, 2	10, 4	28, 5
Deschampsia cespitosa	H	4, 2	20, 4	10, 6
Calamagrostis canadensis	H	3, 1	<b>8, 19</b>	36, 9*
Juncus ensifolius	H	2, 0.1	10, 1	26, 1*

Alliance Code		A4409	A4411	A4412
Alliance (Plot Count)		Ledum groenlandicum - Kalmia microphylla - Rhynchospora alba Shrub & Open Bog (151)	Myrica gale - Carex utriculata - Sphagnum spp. Acidic Shrub & Open Fen (167)	Kalmia microphylla - Caltha leptosepala - Sphagnum spp. Montane Acidic Shrub & Open Fen (39)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Carex kelloggii	H	0, 0	<b>2, 12</b>	41, 5*
Eriophorum angustifolium ssp. angustifolium	H	0, 0	1, 0.1	<b>59, 24**</b>
Equisetum arvense	H	0, 0	1, 1	21, 4*
Pedicularis groenlandica	H	0, 0	0, 0	26, 1*
Caltha biflora	H	0, 0	0, 0	21, 8*
Sphagnum spp.	NV	<b>84, 69</b>	<b>79, 59</b>	<b>67, 67</b>

#### G285 North Pacific Circumneutral to Alkaline Open Fen

**Table B-9.** Synoptic table for alliances in G285 North Pacific Circumneutral to Alkaline Open Fen. A3599 Carex lasiocarpa - Kobresia myosuroides - Carex scirpoidea Alkaline Graminoid Fen does not occur in Washington and A4406 Festuca rubra - Carex interior - Darlingtonia californica Serpentine Fen does not occur in the NCCN parks. Both were excluded from this table.

Alliance Code		A4405
Alliance (Plot Count)		Carex aquatilis var. dives - Carex cusickii Intermediate Fen Alliance (140)
Species	General Growth Form	Const (%), Mean Cover
Vaccinium uliginosum	S	<b>25, 25</b>
Salix pedicellaris	S	<b>22, 13</b>
Spiraea douglasii	S	22, 6
Carex aquatilis var. dives	H	<b>67, 38***</b>
Triantha occidentalis ssp. brevistyla	H	28, 6*
Pedicularis groenlandica	H	27, 3*
Dodecatheon jeffreyi	H	26, 8
Lysimachia europaea	H	26, 3
Eriophorum angustifolium ssp. angustifolium	H	25, 5
Hypericum anagalloides	H	<b>25, 14</b>
Platanthera dilatata	H	25, 1
Comarum palustre	H	<b>24, 13</b>
Viola palustris	H	24, 7
Carex nigricans	H	<b>23, 34</b>
Carex echinata ssp. echinata	H	22, 4



Alliance Code		A4405
Alliance (Plot Count)		Carex aquatilis var. dives - Carex cusickii Intermediate Fen Alliance (140)
Species	General Growth Form	Const (%), Mean Cover
Caltha biflora	H	<b>21, 30*</b>
Equisetum arvense	H	21, 3
Sphagnum spp.	NV	<b>35, 31</b>
Undifferentiated Moss	NV	<b>20, 18</b>

### G610 North Pacific Maritime Wooded Bog & Poor Fen

**Table B-10.** Synoptic table for alliances in G610 North Pacific Maritime Wooded Bog & Poor Fen. A3764 Pinus contorta - Picea sitchensis Alaskan Wooded Bog Alliance does not occur in Washington. It was excluded from this table.

Alliance Code		A4407	A4408
Alliance (Plot Count)		Pinus contorta - Tsuga heterophylla / Ledum groenlandicum / Sphagnum capillifolium Bog Woodland (40)	Pinus contorta - Tsuga heterophylla / Ledum groenlandicum / Carex livida Coastal Bog Woodland (77)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover
Tsuga heterophylla	OT	<b>90, 21</b>	<b>71, 19</b>
Thuja plicata	OT	<b>60, 14</b>	<b>74, 29*</b>
Pinus contorta	OT	<b>55, 35*</b>	<b>29, 35</b>
Picea sitchensis	OT	22, 4	23, 2
Pinus monticola	OT	22, 4	4, 2
Gaultheria shallon	S	<b>95, 20</b>	<b>84, 16</b>
Rhododendron groenlandicum	S	<b>95, 39</b>	<b>79, 23</b>
Kalmia microphylla	S	<b>75, 23</b>	<b>69, 20</b>
Vaccinium oxycoccos	S	38, 7	32, 5
Spiraea douglasii	S	28, 2	18, 7
Vaccinium parvifolium	S	25, 4*	8, 1
Frangula purshiana ssp. purshiana	S	22, 4	29, 3
Malus fusca	S	12, 5	23, 9
Vaccinium ovatum	S	10, 5	26, 6*
Empetrum nigrum	S	8, 8	<b>27, 17*</b>
Myrica gale	S	<b>5, 18</b>	<b>21, 36</b>
Linnaea borealis ssp. longiflora	H	5, 3	44, 4**
Pteridium aquilinum ssp. pubescens	H	<b>68, 15</b>	<b>61, 12</b>

Alliance Code		A4407	A4408
Alliance (Plot Count)		Pinus contorta - Tsuga heterophylla / Ledum groenlandicum / Sphagnum capillifolium Bog Woodland (40)	Pinus contorta - Tsuga heterophylla / Ledum groenlandicum / Carex livida Coastal Bog Woodland (77)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover
Lysichiton americanus	H	40, 3	57, 8**
Cornus (canadensis, unalaschensis)	H	28, 7	56, 4*
Maianthemum dilatatum	H	22, 2	42, 2*
Drosera rotundifolia	H	20, 2	42, 2
Eriophorum chamissonis	H	15, 1	23, 5
Carex obnupta	H	8, 1	<b>44, 22**</b>
Carex echinata ssp. echinata	H	8, 2	40, 6*
Sanguisorba officinalis	H	8, 0.1	32, 5*
Lysimachia europaea	H	5, 1	44, 2**
Gentiana sceptrum	H	5, 0.1	29, 4*
Struthiopteris spicant	H	2, 0.1	73, 7***
Sphagnum spp.	NV	<b>80, 34</b>	<b>92, 56</b>
Undifferentiated Moss	NV	<b>40, 37</b>	<b>22, 19</b>
Cladonia rangiferina	NV	22, 9	10, 6

**M876 North American Boreal & Sboreal Bog & Acidic Fen**

G515 Rocky Mountain Acidic Fen

**Table B-11.** Synoptic table for alliances in G515 Rocky Mountain Acidic Fen. A3438 *Ledum glandulosum* Acidic Shrub Fen Alliance does not occur in Washington. It was excluded from this table. This alliance was not part of WNHP's comprehensive group and alliance review. Future analysis is recommended. No indicator values were calculated for this alliance.

Alliance Code		A3437
Alliance (Plot Count)		Carex lasiocarpa - Carex livida - Dulichium arundinaceum Acidic Graminoid Fen (4)
Species	General Growth Form	Const (%), Mean Cover
<i>Salix pedicellaris</i>	S	75, 4
<i>Vaccinium oxycoccus</i>	S	50, 43
<i>Spiraea douglasii</i> var. <i>menziesii</i>	S	25, 0.1
<i>Carex limosa</i>	H	100, 38
<i>Scheuchzeria palustris</i>	H	75, 3
<i>Drosera anglica</i>	H	50, 3
<i>Drosera rotundifolia</i>	H	50, 1
<i>Utricularia minor</i>	H	50, 3
<i>Angelica genuflexa</i>	H	25, 1
<i>Carex cusickii</i>	H	25, 2
<i>Carex rostrata</i>	H	25, 0.1
<i>Castilleja miniata</i>	H	25, 1
<i>Comarum palustre</i>	H	25, 7
<i>Eleocharis quinqueflora</i>	H	25, 8
<i>Equisetum fluviatile</i>	H	25, 10
<i>Eriophorum gracile</i>	H	25, 20
<i>Juncus ensifolius</i>	H	25, 1
<i>Menyanthes trifoliata</i>	H	25, 15
<i>Micranthes oregana</i>	H	25, 1
<i>Erythranthe guttata</i>	H	25, 1
<i>Platanthera dilatata</i>	H	25, 1
<i>Triantha occidentalis</i> ssp. <i>brevistyla</i>	H	25, 0.1
<i>Typha latifolia</i>	H	25, 38
<i>Sphagnum</i> spp.	NV	100, 45

## **M877 North American Boreal & Sboreal Alkaline Fen**

### G516 Rocky Mountain Alkaline Fen

**Table B-12.** Synoptic table for alliances in G516 Rocky Mountain Alkaline Fen. A3434 *Betula nana* Alkaline Shrub Fen does not occur in the NCCN parks and A3436 *Kobresia myosuroides* - *Kobresia simpliciuscula* Alkaline Graminoid Fen does not occur in Washington. Both were excluded from this table. The remaining alliance was not part of WNHP's comprehensive group and alliance review. Future analysis is recommended. No indicator values were calculated for this alliance.

Alliance Code		A3435
Alliance (Plot Count)		Carex limosa - Carex buxbaumii - Triglochin maritima Alkaline Graminoid Fen (115)
Species	General Growth Form	Const (%), Mean Cover
Carex utriculata	H	<b>60, 27</b>
Comarum palustre	H	<b>34, 11</b>
Calamagrostis canadensis	H	26, 7
Eriophorum angustifolium ssp. angustifolium	H	24, 5
Carex lasiocarpa	H	<b>23, 46</b>
Carex scopulorum var. prionophylla	H	<b>23, 43</b>

## **2.C.4.Nb Western North American Freshwater Shrubland, Wet Meadow & Marsh**

### **M073 Vancouverian Lowland Wet Shrubland, Wet Meadow & Marsh**

#### G322 Vancouverian Wet Shrubland

**Table B-13.** Synoptic table for alliances in G322 Vancouverian Wet Shrubland. A1123 *Vaccinium uliginosum* - *Vaccinium cespitosum* Wet Shrubland Alliance does not occur in Washington. A2609 *Rubus spectabilis* Wet Shrubland Alliance has not been documented in the NCCN parks, though there is a small chance it may occur along the Olympic coastline. Both were excluded from this table.

Alliance Code		A4418	A4419
Alliance (Plot Count)		Alnus viridis - Acer circinatum - Salix sitchensis Montane Wet Shrubland (229)	Spiraea douglasii - Malus fusca - Salix sitchensis Lowland Wet Shrubland (98)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover
Alnus rubra	UT	1, 4	26, 5*
Rubus spectabilis	S	<b>64, 19**</b>	<b>9, 12</b>
Alnus viridis ssp. sinuata	S	<b>60, 51**</b>	3, 9
Sambucus racemosa	S	41, 5**	0, 0
Acer circinatum	S	<b>38, 58*</b>	3, 6
Oplopanax horridus	S	<b>35, 13*</b>	1, 5
Rubus nutkanus	S	28, 7*	2, 2

Alliance Code		A4418	A4419
Alliance (Plot Count)		Alnus viridis - Acer circinatum - Salix sitchensis Montane Wet Shrubland (229)	Spiraea douglasii - Malus fusca - Salix sitchensis Lowland Wet Shrubland (98)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover
Ribes bracteosum	S	<b>23, 14*</b>	0, 0
Ribes lacustre	S	20, 3*	0, 0
Salix sitchensis	S	<b>20, 32</b>	<b>24, 21</b>
Cornus (occidentalis, stolonifera)	S	<b>14, 29</b>	20, 6
Spiraea douglasii	S	6, 2	<b>93, 48***</b>
Lonicera involucrata var. involucrata	S	6, 3	29, 4*
Frangula purshiana ssp. purshiana	S	2, 6	23, 3*
Malus fusca	S	0, 0	<b>49, 24**</b>
Rhododendron groenlandicum	S	0, 0	23, 4*
Gaultheria shallon	S	0, 0	<b>21, 11*</b>
Athyrium filix-femina ssp. cyclosorum	H	<b>70, 11**</b>	30, 4
Viola glabella	H	38, 3*	1, 0.1
Maianthemum stellatum	H	26, 4*	0, 0
Claytonia sibirica	H	25, 4*	0, 0
Gymnocarpium dryopteris	H	24, 5*	0, 0
Maianthemum racemosum ssp. amplexicaule	H	24, 2*	0, 0
Veratrum viride	H	22, 3*	1, 1
Streptopus lanceolatus	H	21, 5*	1, 1
Dicentra formosa ssp. formosa	H	21, 3*	0, 0
Galium triflorum	H	21, 1*	0, 0
Tolmiea menziesii	H	21, 7*	0, 0
Tiarella trifoliata	H	20, 3*	0, 0
Pteridium aquilinum ssp. pubescens	H	<b>21, 12</b>	3, 8
Lysichiton americanus	H	<b>5, 20</b>	39, 5
Carex aquatilis var. dives	H	<b>2, 24</b>	<b>24, 24*</b>
Carex obnupta	H	0.1, 8	<b>45, 27**</b>
Comarum palustre	H	0.1, 0.1	21, 4*
Sphagnum spp.	NV	0, 0	24, 6*

G517 Vancouverian Freshwater Wet Meadow & Marsh Group

**Table B-14.** Synoptic table for alliances in G517 Vancouverian Freshwater Wet Meadow & Marsh. A4415 *Mimulus guttatus* - *Claytonia sibirica* - *Glyceria elata* Seep & Spring, A4422 *Triteleia hyacinthina* - *Mimulus guttatus* Wet Bedrock Vegetation, A4423 *Deschampsia cespitosa* - *Carex unilateralis* - *Danthonia californica* Wet Prairie have not been documented in the NCCN parks and are unlikely to occur there. A4243 *Carex pansa* - *Carex praegracilis* Wet Meadow is a provisional alliance that was not present in the statewide data set. All of these alliances are excluded from this table.

Alliance Code		A4413	A4414
Alliance (Plot Count)		Petasites frigidus - Stachys chamissonis var. cooleyae Streamside Marsh (11)	Carex obnupta - Carex exsuccata - Typha latifolia Basin Marsh & Wet Meadow (62)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover
<i>Spiraea douglasii</i>	S	0, 0	35, 3**
<i>Rubus spectabilis</i>	S	27, 1	6, 2
<i>Ribes bracteosum</i>	S	36, 2**	0, 0
<i>Athyrium filix-femina</i> ssp. <i>cyclosorum</i>	H	36, 5	18, 6
<i>Equisetum arvense</i>	H	27, 2	8, 5
<i>Galium triflorum</i>	H	45, 3**	3, 1
<i>Nuphar polysepala</i>	H	0, 0	35, 10*
<i>Comarum palustre</i>	H	0, 0	24, 5
<i>Stachys cooleyae</i>	H	73, 9***	2, 1
<i>Erythranthe guttata</i>	H	55, 2	2, 0.1
<i>Petasites frigidus</i>	H	100, 51***	0, 0
<i>Claytonia sibirica</i>	H	55, 2**	0, 0
<i>Epilobium glaberrimum</i>	H	36, 2**	0, 0
<i>Epilobium luteum</i>	H	36, 2**	0, 0
<i>Tolmiea menziesii</i>	H	27, 4*	0, 0
<i>Oxalis trilliifolia</i>	H	27, 3*	0, 0
<i>Carex obnupta</i>	H	0, 0	31, 37*
<i>Carex exsuccata</i>	H	0, 0	27, 22*
<i>Carex aquatilis</i>	H	0, 0	23, 9
<i>Typha latifolia</i>	H	0, 0	23, 31

**M888 Arid West Interior Freshwater Marsh**

G531 Arid West Inland Freshwater Emergent Marsh

**Table B-15.** Synoptic table for alliances in G322 Vancouverian Wet Shrubland. A3892 Equisetum fluviatile - Equisetum x ferrissii Marsh does not occur in Washington. A3896 Typha domingensis - Typha latifolia - Phragmites australis ssp. americanus Western Marsh does not occur in the NCCN parks. Both were excluded from this table. The remaining alliances were not part of WNHP's comprehensive group and alliance review. Future analysis is recommended. No indicator values were calculated for these alliances.

Alliance Code		A3891	A3895
Alliance (Plot Count)		Eleocharis palustris - Eleocharis macrostachya Marsh (2)	Schoenoplectus americanus - Schoenoplectus acutus - Schoenoplectus californicus Marsh (3)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover
Picea engelmannii	UT	50, 8	0, 0
Phalaris arundinacea	H	100, 2	33, 62
Calamagrostis canadensis	H	100, 3	0, 0
Carex atherodes	H	100, 68	0, 0
Carex aquatilis var. aquatilis	H	50, 2	33, 1
Carex lasiocarpa	H	50, 2	33, 5
Carex utriculata	H	50, 5	33, 18
Scirpus microcarpus	H	50, 10	33, 0.1
Cirsium arvense	H	50, 8	0, 0
Eleocharis palustris	H	50, 3	0, 0
Equisetum spp.	H	50, 2	0, 0
Glyceria striata	H	50, 5	0, 0
Juncus balticus	H	50, 2	0, 0
Lemna minor	H	50, 35	0, 0
Poa pratensis	H	50, 4	0, 0
Carex pellita	H	0, 0	33, 18
Distichlis spicata	H	0, 0	33, 4
Eleocharis rostellata	H	0, 0	33, 0.1
Mentha canadensis	H	0, 0	33, 4
Persicaria amphibia	H	0, 0	33, 2
Potamogeton spp.	H	0, 0	33, 1
Schoenoplectus acutus	H	0, 0	33, 62
Schoenoplectus americanus	H	0, 0	33, 85
Schoenoplectus tabernaemontani	H	0, 0	33, 40
Triglochin maritima	H	0, 0	33, 0.1
Utricularia vulgaris ssp. macrorhiza	H	0, 0	33, 2

**M893 Western North American Montane Marsh, Wet Meadow & Shrubland**

G520 Vancouverian & Rocky Mountain Subalpine & Alpine Snowbed, Wet Meadow & Dwarf-Shrubland

**Table B-16.** Synoptic table for alliances in G520 Vancouverian & Rocky Mountain Subalpine & Alpine Snowbed, Wet Meadow & Dwarf-Shrubland. A1309 *Carex vernacula* - *Phippsia algida* - *Ptilagrostis kingii* Wet Meadow does not occur in Washington. A0958 *Dasiphora fruticosa* Wet Shrubland Alliance and A1424 *Carex lachenalii* - *Carex capillaris* - *Carex illota* Wet Meadow Alliance were not documented in the NCCN parks and are unlikely to occur there. These alliances were excluded from this table.

Alliance Code		A1698	A3831	A3832	A4417
Alliance (Plot Count)		<i>Caltha leptosepala</i> - <i>Rhodiola rhodantha</i> Wet Meadow (18)	<i>Kalmia microphylla</i> - <i>Cassiope mertensiana</i> - <i>Dryas drummondii</i> Wet Dwarf-Shrubland (16)	<i>Carex nigricans</i> - <i>Sibbaldia procumbens</i> - <i>Trollius laxus</i> Wet Meadow (59)	<i>Mimulus Lewisii</i> - <i>Philonotis fontana</i> Seep & Streambank (8)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Abies lasiocarpa</i>	UT	28, 1	56, 3*	14, 1	0, 0
<i>Larix lyallii</i>	UT	0, 0	25, 2*	2, 3	0, 0
<i>Vaccinium ovalifolium</i>	S	22, 2*	0, 0	0, 0	0, 0
<i>Phylodoce empetriformis</i>	S	33, 4	62, 9	59, 3	38, 4
<i>Vaccinium deliciosum</i>	S	22, 3	62, 11**	36, 1	12, 1
<i>Cassiope mertensiana</i>	S	11, 1	25, 8	34, 2	12, 1
<i>Kalmia microphylla</i>	S	6, 18	75, 17***	5, 3	0, 0
<i>Salix commutata</i>	S	6, 1	19, 2	8, 3	38, 2*
<i>Caltha biflora</i>	H	94, 53***	44, 5	15, 3	12, 5
<i>Valeriana sitchensis</i>	H	50, 13**	12, 2	3, 6	0, 0
<i>Senecio triangularis</i>	H	50, 11**	6, 3	3, 1	0, 0
<i>Veratrum viride</i>	H	39, 4*	25, 2	7, 5	12, 0.1
<i>Platanthera stricta</i>	H	33, 2*	0, 0	0, 0	0, 0
<i>Lysichiton americanus</i>	H	28, 7*	6, 3	0, 0	0, 0
<i>Athyrium filix-femina</i> ssp. <i>cyclosorum</i>	H	22, 6*	0, 0	0, 0	0, 0
<i>Carex nigricans</i>	H	44, 13	94, 35	100, 53*	75, 6
<i>Pedicularis groenlandica</i>	H	33, 1	25, 3	5, 6	38, 6
<i>Calamagrostis canadensis</i>	H	28, 3	31, 7	3, 2	0, 0
<i>Viola palustris</i>	H	28, 22	6, 2	0, 0	0, 0
<i>Potentilla flabellifolia</i>	H	22, 7	69, 6*	27, 3	38, 1



Alliance Code		A1698	A3831	A3832	A4417
Alliance (Plot Count)		Caltha leptosepala - Rhodiola rhodantha Wet Meadow (18)	Kalmia microphylla - Cassiope mertensiana - Dryas drummondii Wet Dwarf-Shrubland (16)	Carex nigricans - Sibbaldia procumbens - Trollius laxus Wet Meadow (59)	Mimulus Lewisii - Philonotis fontana Seep & Streambank (8)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Carex spectabilis	H	22, 5	25, 2	46, 8	38, 9
Leptarrhena pyrolifolia	H	22, 6	6, 2	10, 1	38, 3
Arnica latifolia	H	22, 3	6, 0.1	3, 1	12, 5
Equisetum spp.	H	22, 5	0, 0	0, 0	0, 0
Erigeron glacialis	H	17, 1	38, 2	12, 2	25, 4
Dodecatheon jeffreyi	H	<b>17, 12</b>	25, 1	5, 1	12, 2
Vahlodea atropurpurea	H	17, 1	12, 0.1	32, 3	<b>12, 10</b>
Veronica wormskjoldii	H	17, 2	6, 0.1	7, 2	38, 1
Luetkea pectinata	H	11, 1	25, 2	66, 6*	50, 5
Micranthes nelsoniana var. cascadenis	H	11, 4	6, 2	3, 2	38, 1
Carex scopulorum	H	6, 5	31, 7	12, 5	12, 2
Gentiana calycosa	H	6, 1	25, 3	7, 2	0, 0
Eriophorum angustifolium ssp. angustifolium	H	6, 4	25, 2	0, 0	0, 0
Bistorta bistortoides	H	6, 0.1	6, 4	14, 5	25, 0.1
Juncus drummondii	H	6, 3	0, 0	34, 3	62, 4**
Epilobium anagallidifolium	H	6, 1	0, 0	17, 2	38, 3
Erythranthe lewisii	H	6, 1	0, 0	5, 7	<b>62, 19**</b>
Petasites frigidus	H	6, 1	0, 0	0, 0	<b>38, 19*</b>
Juncus mertensianus	H	0, 0	6, 2	17, 6	<b>62, 11**</b>
Micranthes tolmiei	H	0, 0	0, 0	25, 1*	12, 0.1
Athyrium distentifolium ssp. americanum	H	0, 0	0, 0	5, 1	<b>25, 10</b>
Erythranthe tilingii	H	0, 0	0, 0	0, 0	25, 4
Undifferentiated Moss	NV	<b>17, 25</b>	<b>31, 13</b>	<b>34, 16</b>	<b>62, 20*</b>

G521 Vancouverian-Rocky Mountain Montane Wet Meadow & Marsh

**Table B-17.** Synoptic table for alliances in G521 Vancouverian-Rocky Mountain Montane Wet Meadow & Marsh. A4426 *Danthonia californica* - *Deschampsia cespitosa* - *Camassia quamash* Wet Grassland does not occur in the NCCN parks and was excluded from this table.

Alliance Code		A4424	A4425	A4427
Alliance (Plot Count)		Senecio triangularis - Saxifraga spp. - Mimulus spp. Streamside Wet Meadow (17)	Carex utriculata - Calamagrostis canadensis Basin Marsh & Wet Meadow (145)	Heracleum maximum - Carex scopulorum var. bracteosa - Veratrum viride Wet Meadow (33)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
<i>Abies amabilis</i>	UT	35, 4	1, 5	0, 0
<i>Tsuga heterophylla</i>	UT	24, 1	2, 1	0, 0
<i>Ribes lacustre</i>	S	29*, 3*	1, 5	6, 0.1
<i>Athyrium filix-femina</i> ssp. <i>cyclosum</i>	H	<b>53, 22**</b>	8, 6	3, 5
<i>Gymnocarpium dryopteris</i>	H	<b>24, 17</b>	1, 3	0, 0
<i>Senecio triangularis</i>	H	<b>65, 5*</b>	5, 8	<b>27, 7</b>
<i>Valeriana sitchensis</i>	H	<b>53, 7**</b>	1, 2	<b>24, 2</b>
<i>Pectiantia pentandra</i>	H	<b>41, 5*</b>	1, 1	3, 1
<i>Tiarella trifoliata</i> var. <i>unifoliata</i>	H	<b>41, 7*</b>	1, 1	0, 0
<i>Streptopus amplexifolius</i>	H	<b>35, 2*</b>	3, 1	3, 1
<i>Viola glabella</i>	H	<b>29, 3</b>	<b>3, 14</b>	9, 2
<i>Micranthes nelsoniana</i> var. <i>cascadensis</i>	H	<b>29, 22*</b>	1, 1	0, 0
<i>Streptopus lanceolatus</i>	H	<b>29, 1*</b>	1, 2	0, 0
<i>Trautvetteria caroliniensis</i>	H	<b>24, 28*</b>	3, 1	0, 0
<i>Arnica latifolia</i>	H	<b>24, 1</b>	0, 0	18, 2
<i>Heracleum maximum</i>	H	18, 2	1, 1	<b>52, 26**</b>
<i>Chamaenerion angustifolium</i>	H	<b>12, 14</b>	1, 0.1	<b>21, 5</b>
<i>Lupinus latifolius</i>	H	6, 2	1, 0.1	<b>21, 10</b>
<i>Thalictrum occidentale</i>	H	6, 1	0, 0	<b>30, 11*</b>
<i>Canadanthus modestus</i>	H	0, 0	<b>4, 11</b>	<b>21, 3</b>
<i>Achillea millefolium</i>	H	0, 0	2, 3	<b>27, 3</b>
<i>Veratrum viride</i>	H	0, 0	1, 5	<b>27*, 3</b>
<i>Cirsium edule</i>	H	0, 0	0, 0	<b>48, 4**</b>
<i>Calamagrostis canadensis</i>	H	0, 0	<b>31, 29*</b>	18, 4
<i>Bromus sitchensis</i>	H	0, 0	0, 0	<b>27, 11*</b>
<i>Carex utriculata</i>	H	0, 0	<b>43, 42**</b>	0, 0

Alliance Code		A4424	A4425	A4427
Alliance (Plot Count)		Senecio triangularis - Saxifraga spp. - Mimulus spp. Streamside Wet Meadow (17)	Carex utriculata - Calamagrostis canadensis Basin Marsh & Wet Meadow (145)	Heracleum maximum - Carex scopulorum var. bracteosa - Veratrum viride Wet Meadow (33)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Carex scopulorum var. bracteosa	H	0, 0	1, 5	<b>48, 55**</b>
Carex spectabilis	H	0, 0	1, 2	<b>24*, 12</b>

### G527 Western Montane-Subalpine Riparian & Seep Shrubland

**Table B-18.** Synoptic table for alliances in G527 Western Montane-Subalpine Riparian & Seep Shrubland Group. A0981 Salix monticola Wet Shrubland, A2563 Salix orestera Wet Shrubland, A3770 Salix wolfii - Salix brachycarpa - Betula Glandulosa Wet Shrubland, and A3774 Salix eastwoodiae - Salix lemmonii Wet Shrubland do not occur in Washington and were excluded from this table.

Alliance Code		A1003	A4416	A4420	A4421
Alliance (Plot Count)		Salix commutata Wet Shrubland (49)	Alnus viridis ssp. sinuata Riparian Shrubland (125)	Salix drummondiana - Alnus incana Shrub Carr & Swamp (120)	Alnus incana - Cornus sericea Riparian Shrubland (196)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Abies lasiocarpa	OT	24, 3*	12, 4	8, 3	8, 4
Abies lasiocarpa	UT	47, 4*	23, 2	9, 2	9, 2
Salix commutata	S	<b>96, 50***</b>	2, 6	<b>2, 10</b>	1, 7
Alnus viridis ssp. sinuata	S	12, 3	<b>84, 59***</b>	<b>7, 33</b>	9, 8
Salix sitchensis	S	<b>8, 11</b>	<b>29, 46</b>	<b>12, 26</b>	<b>10, 23</b>
Lonicera involucrata var. involucrata	S	6, 2	21, 3	22, 3	26, 7
Vaccinium membranaceum	S	4, 3	22, 3	1, 5	2, 2
Ribes lacustre	S	2, 1	37, 7	9, 2	41, 4*
Sambucus racemosa	S	2, 0.1	24, 5	1, 2	8, 3
Cornus stolonifera	S	<b>2, 10</b>	<b>11, 18</b>	19, 5	<b>72, 30***</b>
Salix drummondiana	S	2, 7	0, 0	<b>38, 38*</b>	4, 4
Rubus nutkanus	S	0, 0	28, 7	1, 4	33, 5
Acer glabrum var. douglasii	S	0, 0	13, 7	1, 3	20, 8

Alliance Code		A1003	A4416	A4420	A4421
Alliance (Plot Count)		Salix commutata Wet Shrubland (49)	Alnus viridis ssp. sinuata Riparian Shrubland (125)	Salix drummondiana - Alnus incana Shrub Carr & Swamp (120)	Alnus incana - Cornus sericea Riparian Shrubland (196)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Alnus incana ssp. tenuifolia	S	0, 0	<b>8, 18</b>	<b>57, 33</b>	<b>82, 48**</b>
Symphoricarpos albus	S	0, 0	3, 6	7, 7	<b>46, 16**</b>
Rubus idaeus ssp. strigosus	S	0, 0	2, 2	11, 3	23, 3
Spiraea douglasii	S	0, 0	1, 7	<b>43, 43*</b>	<b>11, 33</b>
Phyllodoce empetriformis	S	<b>43, 6**</b>	2, 1	0, 0	1, 1
Athyrium filix-femina ssp. cyclosorum	H	4, 1	<b>31, 12</b>	<b>18, 12</b>	<b>38, 14</b>
Gymnocarpium dryopteris	H	0, 0	<b>23, 16</b>	1, 0.1	15, 8
Equisetum arvense	H	<b>51, 8*</b>	14, 2	<b>33, 3</b>	<b>40, 16</b>
Leptarrhena pyrolifolia	H	<b>51, 7**</b>	2, 2	1, 2	1, 4
Potentilla flabellifolia	H	<b>43, 6**</b>	2, 1	1, 4	0, 0
Valeriana sitchensis	H	<b>39, 11*</b>	<b>18, 10</b>	2, 5	3, 3
Caltha (biflora, leptosepala)	H	<b>39, 5*</b>	2, 6	1, 6	1, 8
Pedicularis groenlandica	H	<b>37, 2*</b>	0, 0	2, 1	1, 1
Senecio triangularis	H	<b>33, 5</b>	<b>24, 2</b>	<b>20, 4</b>	<b>22, 5</b>
Parnassia fimbriata	H	<b>31, 3*</b>	5, 1	0, 0	1, 2
Gentiana calycosa	H	<b>27, 5*</b>	0, 0	0, 0	0, 0
Lupinus latifolius	H	<b>24, 3*</b>	1, 3	0, 0	0, 0
Arnica latifolia	H	<b>22, 3</b>	9, 3	0, 0	1, 4
Erigeron glacialis	H	<b>20, 2</b>	<b>2, 10</b>	3, 8	<b>2, 18</b>
Veronica wormsjoldii	H	<b>20, 1</b>	2, 0.1	1, 8	0, 0
Viola glabella	H	<b>14, 2</b>	<b>29, 6</b>	<b>7, 4</b>	<b>24, 3</b>
Heracleum maximum	H	<b>10, 1</b>	<b>26, 4</b>	<b>3, 1</b>	<b>23, 4</b>
Galium triflorum	H	<b>6, 1</b>	<b>24, 3</b>	<b>8, 1</b>	<b>30, 2</b>
Thalictrum occidentale	H	<b>4, 1</b>	<b>26, 5</b>	<b>2, 2</b>	<b>10, 3</b>
Maianthemum stellatum	H	<b>4, 4</b>	<b>10, 5</b>	<b>13, 2</b>	<b>36, 4*</b>
Circaea alpina	H	<b>2, 2</b>	<b>7, 5</b>	<b>3, 6</b>	<b>21, 5</b>
Comarum palustre	H	<b>2, 1</b>	0, 0	<b>23, 3*</b>	<b>3, 8</b>
Urtica dioica	H	0, 0	9, 4	5, 1	<b>24, 2</b>
Geum macrophyllum	H	0, 0	2, 1	<b>23, 1</b>	<b>30, 2*</b>
Phleum alpinum	H	<b>20, 2*</b>	1, 0.1	1, 1	1, 1
Calamagrostis canadensis	H	<b>16, 12</b>	7, 5	<b>61, 24**</b>	10, 5

Alliance Code		A1003	A4416	A4420	A4421
Alliance (Plot Count)		Salix commutata Wet Shrubland (49)	Alnus viridis ssp. sinuata Riparian Shrubland (125)	Salix drummondiana - Alnus incana Shrub Carr & Swamp (120)	Alnus incana - Cornus sericea Riparian Shrubland (196)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Cinna latifolia	H	6, 1	18, 3	2, 3	27, 4
Glyceria elata	H	2, 3	5, 4	17, 6	30, 7*
Carex spectabilis	H	33, 6*	6, 2	0, 0	0, 0
Carex nigricans	H	33, 8*	0, 0	0, 0	0, 0
Carex utriculata	H	4, 2	2, 3	51, 27**	7, 4
Scirpus microcarpus	H	0, 0	2, 6	26, 17*	7, 2
Undifferentiated Moss	NV	55, 23**	6, 7	2, 18	0, 0

## 5.B.2.Na North American Freshwater Aquatic Vegetation

### M109 Western North American Freshwater Aquatic Vegetation

#### G544 Western North American Temperate Freshwater Aquatic Vegetation

**Table B-19.** Synoptic table for alliances in G544 Western North American Temperate Freshwater Aquatic Vegetation. A1747 Lemna minor - Wolffia borealis - Wolffia columbiana Aquatic Vegetation, A2628 Fontinalis antipyretica Aquatic Vegetation, and A3921 Utricularia macrorhiza - Utricularia minor - Utricularia ochroleuca Aquatic Vegetation likely occur in the NCCN parks, but are absent from the statewide Washington data set. Many other alliances in this group do not occur in the NCCN parks and were excluded from this table. The remaining alliances were not part of WNHP's comprehensive group and alliance review. Future analysis is recommended. No indicator values were calculated for these alliances.

Alliance Code		A3893	A3920	A3922	A3924	A3925	A3926	A3927	A3929
<b>Alliance (Plot Count)</b>		Hippuris vulgaris - Ruppia spp. - Sparganium spp. Aquatic Vegetation (11)	Ranunculus aquatilis - Callitriche palustris - Callitriche heterophylla Aquatic Vegetation (1)	Brasenia schreberi Aquatic Vegetation (1)	Elodea canadensis Aquatic Vegetation (2)	Menyanthes trifoliata Aquatic Vegetation (2)	Nuphar polysepala Western Aquatic Vegetation (17)	Potamogeton natans - Polygonum amphibium Aquatic Vegetation (3)	Schoenoplectus Sterminalis Aquatic Vegetation (3)
<b>Species</b>	<b>General Growth Form</b>	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Alnus rubra	UT	0, 0	0, 0	0, 0	0, 0	50, 1	6, 2	0, 0	0, 0
Thuja plicata	UT	0, 0	0, 0	0, 0	0, 0	50, 1	6, 0.1	0, 0	0, 0
Callitropsis nootkatensis	UT	0, 0	0, 0	0, 0	0, 0	50, 1	0, 0	0, 0	0, 0
Pinus monticola	UT	0, 0	0, 0	0, 0	0, 0	50, 1	0, 0	0, 0	0, 0
Tsuga heterophylla	UT	0, 0	0, 0	0, 0	0, 0	50, 1	0, 0	0, 0	0, 0
Salix sitchensis	S	0, 0	0, 0	0, 0	0, 0	50, 1	6, 2	0, 0	0, 0
Gaultheria shallon	S	0, 0	0, 0	0, 0	0, 0	50, 0.1	0, 0	0, 0	0, 0
Lonicera involucrata var. involucrata	S	0, 0	0, 0	0, 0	0, 0	50, 1	0, 0	0, 0	0, 0

Alliance Code		A3893	A3920	A3922	A3924	A3925	A3926	A3927	A3929
<b>Alliance (Plot Count)</b>		Hippuris vulgaris - Ruppia spp. - Sparganium spp. Aquatic Vegetation (11)	Ranunculus aquatilis - Callitriche palustris - Callitriche heterophylla Aquatic Vegetation (1)	Brasenia schreberi Aquatic Vegetation (1)	Elodea canadensis Aquatic Vegetation (2)	Menyanthes trifoliata Aquatic Vegetation (2)	Nuphar polysepala Western Aquatic Vegetation (17)	Potamogeton natans - Polygonum amphibium Aquatic Vegetation (3)	Schoenoplectus Sterminalis Aquatic Vegetation (3)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Rhododendron menziesii	S	0, 0	0, 0	0, 0	0, 0	50, 0.1	0, 0	0, 0	0, 0
Spiraea douglasii	S	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	33, 2
Sparganium emersum	H	45, 32	0, 0	0, 0	0, 0	0, 0	24, 6	33, 10	0, 0
Sparganium natans	H	36, 48	0, 0	0, 0	50, 10	0, 0	18, 9	0, 0	0, 0
Carex utriculata	H	36, 5	0, 0	0, 0	0, 0	100, 4	18, 1	33, 3	0, 0
Lemna minor	H	27, 13	0, 0	0, 0	0, 0	0, 0	6, 0.1	0, 0	0, 0
Eleocharis palustris	H	18, 10	100, 15	0, 0	0, 0	0, 0	18, 2	0, 0	0, 0
Glyceria borealis	H	18, 3	0, 0	0, 0	100, 4	0, 0	0, 0	67, 6	0, 0
Equisetum fluviatile	H	18, 3	0, 0	0, 0	50, 1	100, 11	18, 4	0, 0	0, 0
Nuphar polysepala	H	9, 4	0, 0	0, 0	100, 15	50, 3	94, 39	33, 15	100, 12
Potamogeton natans	H	9, 10	0, 0	0, 0	50, 35	0, 0	18, 34	67, 52	0, 0
Elodea canadensis	H	9, 10	0, 0	0, 0	50, 45	0, 0	0, 0	0, 0	0, 0
Potamogeton spp.	H	9, 1	0, 0	0, 0	0, 0	50, 15	18, 4	0, 0	0, 0
Typha latifolia	H	9, 2	0, 0	0, 0	0, 0	50, 1	18, 3	0, 0	0, 0
Ranunculus flammula	H	9, 18	0, 0	0, 0	0, 0	0, 0	0, 0	33, 5	0, 0
Torreyochloa pallida var. pauciflora	H	9, 5	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	33, 4
Ranunculus aquatilis	H	0, 0	100, 75	0, 0	0, 0	0, 0	0, 0	33, 15	0, 0
Carex vesicaria	H	0, 0	100, 5	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0

Alliance Code		A3893	A3920	A3922	A3924	A3925	A3926	A3927	A3929
<b>Alliance (Plot Count)</b>		Hippuris vulgaris - Ruppia spp. - Sparganium spp. Aquatic Vegetation (11)	Ranunculus aquatilis - Callitriche palustris - Callitriche heterophylla Aquatic Vegetation (1)	Brasenia schreberi Aquatic Vegetation (1)	Elodea canadensis Aquatic Vegetation (2)	Menyanthes trifoliata Aquatic Vegetation (2)	Nuphar polysepala Western Aquatic Vegetation (17)	Potamogeton natans - Polygonum amphibium Aquatic Vegetation (3)	Schoenoplectus Sterminalis Aquatic Vegetation (3)
Species	General Growth Form	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Dulichium arundinaceum	H	0, 0	0, 0	100, 4	0, 0	0, 0	6, 0.1	0, 0	67, 4
Brasenia schreberi	H	0, 0	0, 0	100, 38	0, 0	0, 0	6, 4	0, 0	33, 38
Carex obnupta	H	0, 0	0, 0	100, 4	0, 0	0, 0	0, 0	0, 0	0, 0
Elodea spp.	H	0, 0	0, 0	0, 0	50, 65	0, 0	6, 62	0, 0	0, 0
Menyanthes trifoliata	H	0, 0	0, 0	0, 0	0, 0	100, 30	12, 1	0, 0	33, 0.1
Utricularia vulgaris ssp. macrorhiza	H	0, 0	0, 0	0, 0	0, 0	50, 25	6, 7	0, 0	33, 0.1
Scirpus microcarpus	H	0, 0	0, 0	0, 0	0, 0	50, 10	6, 5	0, 0	0, 0
Eriophorum angustifolium ssp. angustifolium	H	0, 0	0, 0	0, 0	0, 0	50, 5	0, 0	0, 0	0, 0
Glyceria grandis	H	0, 0	0, 0	0, 0	0, 0	50, 5	0, 0	0, 0	0, 0
Juncus articulatus	H	0, 0	0, 0	0, 0	0, 0	50, 2	0, 0	0, 0	0, 0
Juncus ensifolius	H	0, 0	0, 0	0, 0	0, 0	50, 8	0, 0	0, 0	0, 0
Platanthera dilatata	H	0, 0	0, 0	0, 0	0, 0	50, 15	0, 0	0, 0	0, 0
Pteridium aquilinum ssp. pubescens	H	0, 0	0, 0	0, 0	0, 0	50, 1	0, 0	0, 0	0, 0
Juncus supiniformis	H	0, 0	0, 0	0, 0	0, 0	0, 0	12, 0.1	0, 0	33, 2
Schoenoplectus Sterminalis	H	0, 0	0, 0	0, 0	0, 0	0, 0	6, 4	0, 0	100, 24
Juncus balticus	H	0, 0	0, 0	0, 0	0, 0	0, 0	6, 0.1	0, 0	33, 0.1



Alliance Code		A3893	A3920	A3922	A3924	A3925	A3926	A3927	A3929
<b>Alliance (Plot Count)</b>		Hippuris vulgaris - Ruppia spp. - Sparganium spp. Aquatic Vegetation (11)	Ranunculus aquatilis - Callitriche palustris - Callitriche heterophylla Aquatic Vegetation (1)	Brasenia schreberi Aquatic Vegetation (1)	Elodea canadensis Aquatic Vegetation (2)	Menyanthes trifoliata Aquatic Vegetation (2)	Nuphar polysepala Western Aquatic Vegetation (17)	Potamogeton natans - Polygonum amphibium Aquatic Vegetation (3)	Schoenoplectus Sterminalis Aquatic Vegetation (3)
<b>Species</b>	<b>General Growth Form</b>	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover	Const (%), Mean Cover
Eleocharis acicularis	H	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	33, 2	33, 0.1
Potamogeton gramineus	H	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	<b>33, 75</b>	0, 0
Carex viridula ssp. viridula	H	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	0, 0	33, 4

## References

Ramm-Granberg, T., F. J. Rocchio, C. Copass, R. Brunner, and E. Nielsen. 2021. Revised vegetation classification for Mount Rainier, North Cascades, and Olympic National Parks: Descriptions and identification keys for plant associations and wetland alliances. North Coast and Cascades Network. National Park Service, Port Angeles, Washington.