

**APPENDIX 17-C
ASSESSMENT OF
CULTURALLY IMPORTANT PLANTS**

Seabridge Gold Inc.

KSM PROJECT
Assessment of Culturally Important
Plants

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1. Background

This assessment, prepared as an appendix to Chapter 17 of the KSM Project Application for an Environmental Assessment Certificate / Environmental Impact Statement, defines culturally important plants as the plant species identified within the desk-based ethnographic reports prepared by Rescan Environmental Services Ltd. (Rescan 2010, 2012a-d). The reports utilized secondary information for each of the following Aboriginal groups: Tahltan Nation, Skii km Lax Ha, Gitanyow Nation and Wilp Wii'litswx, Nisga'a Nation, and Gitxsan Nation.

A summary memorandum (memo) was prepared by Rescan that highlights, for each Aboriginal group, the information on terrestrial ecosystems and plant species of cultural importance. The information was derived from a variety of sources, including:

- Appendices 30-A to 30-D: Rescan desk-based ethnographic reports (Rescan 2010, 2012a-d);
- *Tahltan Traditional Use Study of the Northwest Transmission Line Project – Interim Report* (Tahltan Heritage Resources Environmental Assessment Team 2009); and
- *Nisga'a Final Agreement* (2001).

The memo summarizes the plant species identified as important for a variety of traditional and current uses, including for food (including as trade items), medicinal and other utility or cultural uses (shelter, construction, baskets, weaving, etc.). This assessment does not provide an ethnobotanical summary of cultural plant use; rather, it assesses the plant species, regardless of use, that are referenced within the memo. In addition to the species identified, other plant species are likely used for a variety of purposes. However, given the similarities in plant species identified as important to the different Aboriginal groups, the species of local importance are addressed within this assessment.

In this assessment, culturally important plants are given collective importance and their specific value as food, medicine or for construction etc., was not assessed. If a plant species was identified as being used in any manner, it is included in the assessment.

2. Objectives

The objectives of this assessment are to:

- compile the results of vegetation data from Terrestrial Ecosystem Mapping (TEM) field surveys to identify the potential for different terrestrial ecosystems to provide plants of cultural importance;
- summarize the number of culturally important plants identified within different ecosystems to provide a coarse assessment of plant habitat suitability; and to
- provide a summary table of the potential KSM Project-related effects (vegetation loss and degradation) on individual ecosystems.

3. Limitations

The results in this assessment are based on simple species presence information and do not consider the percentage cover or vigour of the individual plant species. The assessment is not designed to be a statistical analysis, but rather an assessment to identify ecosystems that exhibit higher likelihood to provide culturally important plant species.

4. Methodology

This assessment is based upon the vegetation lists compiled from 194 ground inspection plots that were established during the TEM surveys in the KSM Project local study area. The vegetation lists were generated using the reporting function within the VENUS 5.1 data entry software (British Columbia Ministry of Environment 2011).

In this assessment, “ecosystem” refers to the unique combination of BEC unit and ecosystem unit (site series) mapped throughout the local study area and which forms the basis for the terrestrial ecosystems effects assessment. For forested sites, ecosystems adopt the site series naming convention (as identified in the Prince Rupert Forest Region Land Management Handbook [Banner et al. 1993]) and, for non-forested sites (including wetlands), the ecosystem names conform to the provincial classifications for non-forested ecosystems (Resources Inventory Committee 1998; MacKenzie 2012). All site series adopt codes that are approved by the British Columbia Ministry of Environment for ecosystem classification and mapping.

Vegetation information was summarized for each of the six BEC units mapped in the local study area (total number of field survey plots in parentheses):

1. ICHvc: Very Wet Cold Interior Cedar Hemlock Subzone (15 plots).
2. CWHwm: Wet Maritime Coastal Western Hemlock Subzone (25 plots).
3. MHmm2: Leeward Moist Maritime Mountain Hemlock Variant (55 plots).
4. ESSFwv: Wet Very Cold Engelmann Spruce - Subalpine Fir Subzone (65 plots).
5. CMAunp: Coastal Mountain-heather (undifferentiated) Alpine & Parkland (26 plots).
6. BAFAunp: Boreal Altai Fescue (undifferentiated) Alpine & Parkland (8 plots).

The number of culturally important plant occurrences was recorded for each ecosystem and subsequently reported as a percentage of the total number of plots in that ecosystem. For example, within the ESSFwv/01 (FA) ecosystem, black huckleberry (*Vaccinium membranaceum*) was identified within eight (80%) of the ten field plots.

All ecosystems represented by three or more field plots were included in the assessment and those with fewer were excluded from further assessment, as the number of plots was considered too small to represent trends in species occurrences. The total number of unique plants was tallied, by ecosystem, and those identified within fewer than 25% of the field plots were also excluded from further assessment.

5. Results

Appendix 1 to this assessment summarizes the culturally important plants identified within the memos, identifies their primary use, and whether or not they were recorded during the TEM field vegetation surveys. Of the 46 plant species identified within the memo, 33 species were recorded within at least one field plot (Table 5-1). Although the type of use is not specifically assessed, most species included within this assessment represent plants of traditional food and/or medicinal value. The common name, Latin name and vegetation growth form are provided for each of the plants.

Table 5-1. Culturally Important Plants Identified during TEM Field Surveys

Common Name	Latin Name	Growth Form
cottonwood	<i>Populus balsamifera</i> ssp. <i>Trichocarpa</i>	Tree_Deciduous
hemlock (western and mountain)	<i>Tsuga heterophylla</i> , <i>T. mertensiana</i>	Tree_Conifer
spruce (hybrid, Engelmann)	<i>Picea</i> spp.	Tree_Conifer
subalpine fir	<i>Abies lasiocarpa</i>	Tree_Conifer
mountain alder	<i>Alnus incana</i>	Shrub_Tall
willow species	<i>Salix</i> spp.	Shrub_Tall
red-osier dogwood	<i>Cornus stolonifera</i>	Shrub_Tall
red elderberry	<i>Sambucus racemosa</i>	Shrub_Tall
salmonberry	<i>Rubus spectabilis</i>	Shrub_Tall
devil's club	<i>Oplopanax horridus</i>	Shrub_Tall
thimbleberry	<i>Rubus parviflorus</i>	Shrub_Low
high-bush cranberry	<i>Viburnum edule</i>	Shrub_Low
gooseberry species	<i>Ribes lacustre</i> , <i>R. triste</i>	Shrub_Low
black huckleberry	<i>Vaccinium membranaceum</i>	Shrub_Low
blueberry species	<i>Vaccinium</i> spp.	Shrub_Low
soapberry	<i>Shepherdia canadensis</i>	Shrub_Low
juniper	<i>Juniperus communis</i>	Shrub_Low
bog cranberry	<i>Oxycoccus oxycoccus</i>	Shrub_Low
crowberry	<i>Empetrum nigrum</i>	Shrub_Low
prince's pine	<i>Chimaphila umbellata</i>	Shrub_Low
cow parsnip	<i>Heracleum</i> sp.	Herb_For
dandelion	<i>Taraxacum</i> sp.	Herb_For
ferns (miscellaneous)	<i>Gymnocarpium dryopteris</i> , <i>Dryopteris expansa</i> , <i>Athyrium filix-femina</i> , <i>Pteridium aquilinum</i>	Herb_For
fireweed	<i>Epilobium</i> spp.	Herb_For
horsetails	<i>Equisetum</i> spp.	Herb_For

(continued)

Table 5-1. Culturally Important Plants Identified during TEM Field Surveys (completed)

Common Name	Latin Name	Growth Form
mountain sorrel	<i>Oxyria digyna</i>	Herb_Forb
nettle species	<i>Urtica dioica, U. gracilis</i>	Herb_Forb
skunk cabbage	<i>Lysichiton americanum</i>	Herb_Forb
twisted stalk	<i>Streptopus roseus, S. amplexifolius</i>	Herb_Forb
tule (bulrush)	<i>Scirpus</i> spp.	Aquatic
feather moss	<i>Pleurozium schreberi</i>	Moss
<i>Sphagnum</i> moss	<i>Sphagnum</i> spp.	Moss
leafy moss	<i>Rhizomnium</i> spp., <i>Mnium</i> spp., <i>Plagiomnium</i> spp.	Moss

Thirteen plant species were not identified in any of the field plots and are excluded from the assessment (Table 5-2). However, non-detection does not imply they do not occur in the KSM Project area.

Table 5-2. Culturally Important Plants Not Identified during TEM Field Surveys

Common Name	Latin Name	Growth Form
yellow cedar	<i>Chamaecyparis nootkatensis</i>	Tree_Conifer
lodgepole pine	<i>Pinus contorta</i>	Tree_Conifer
raspberry	<i>Rubus idaeus</i>	Shrub_Low
rose	<i>Rosa acicularis</i>	Shrub_Low
Labrador tea	<i>Ledum groenlandicum</i>	Shrub_Low
kinnikinnick	<i>Arctostaphylos uva-ursi</i>	Shrub_Low
caribou weed	<i>Artemesia tilesii</i>	Herb_Forb
cattail	<i>Typha</i> spp.	Herb_Forb
lamb's quarter	<i>Chenopodium album</i>	Herb_Forb
peavine	<i>Lathyrus</i> spp.	Herb_Forb
riceroot	<i>Fritillaria camschatcensis</i>	Herb_Forb
yellow water/pond lily	<i>Nuphar lutea</i>	Aquatic
wolf moss / wolf lichen	<i>Letharia vulpina</i>	Moss

Appendix 1 also identifies the local Aboriginal groups that identified the plant species, the Biogeoclimatic Ecosystem Classification (BEC) unit and General Ecosystem Types within which the plant species is most likely to occur, and identifies associated wildlife value. It is expected that use of vegetation by culturally important wildlife species could dictate where (i.e., geographic, elevation), when (i.e., seasonal, time of day), and how plant species were, and are currently, utilized. Appendix 17-A provides detailed information on the local and regional BEC and ecosystem mapping methodology.

Table 5-3 summarizes the results of the assessment, by BEC unit. For ecosystems represented by three or more field plots, the results summarize the total number of culturally important plants identified, the number of plants occurring in greater than 25% of the field plots, and the number in greater than 60% of the field plots. The percentage cut-off values of 25 and 60% were arbitrarily selected to provide an indication of the likelihood that a given plot within an individual ecosystem will contain plants of importance. Results are displayed by BEC unit, in decreasing order of the plants occurring in greater than 60% of the field plots.

Appendix 2 identifies the specific plant species within greater than 60% of the field plots for the BEC Unit and TEM Map Code combinations in Table 5-3.

The total number of culturally important plants ranged from a low of four, within the CWHunp/00 (AM) ecosystem, to a high of 19, within the MHmm2/03 (MO) and ESSFwv/06 (FD) ecosystems. Some ecosystems, in particular the shrub-dominated avalanche track ecosystems within MHmm2 and ESSFwv BEC subzones, supported a high total number of culturally important plant species (18 and 15 species, respectively), but dropped to just three and one species, respectively, when assessing just the plants occurring in greater than 60% of the field plots. Despite the large number of total species, this suggests a higher variability between species assemblages in these ecosystems.

For each of the terrestrial ecosystems within Table 5-3, Table 5-4 summarizes the vegetation loss and degradation estimates, as provided in Chapter 17 of the Application for an Environmental Assessment Certificate / Environmental Impact Statement.

The percentage values in parentheses in Table 5-4 represent the percentage of baseline ecosystem distributions within the terrestrial ecosystems local study area (Chapter 17, Figure 17.1-1). The vegetation loss estimates identify potential losses resulting from clearing of vegetation during infrastructure development. Defined within Chapter 17, degradation may result from a number of sources including the deposition of fugitive dust, introduction and spread of invasive plant species, changes to surface hydrology, and windthrow damage along newly created clearings within forested ecosystems. It is expected that the recommended management and monitoring strategies outlined within the Terrestrial Ecosystems Management and Monitoring Plans, the Terrain, Surficial Geology and Soil Management and Monitoring Plan, and the Air Quality Management Plan, within Chapter 26, will largely mitigate the potential effects of vegetation degradation.

Some of the losses within the Moist and Wetter Forest General Ecosystem Types could be mitigated through creation of new riparian habitat, as addressed within the Fish Habitat Compensation Plan (Chapter 15).

The largest vegetation loss and degradation estimates occur within ecosystems in the MHmm2 BEC variant and the ESSFwv BEC subzone. Within the MHmm2 BEC variant, development of the proposed Mine Site infrastructure could result in losses within three terrestrial ecosystems that provide culturally important plant species. By area, estimated losses are approximately equal within the Mesic Forest (445 ha) and Avalanche Track (423 ha) General Ecosystem Types.

Table 5-3. Summary of Culturally Important Plants, by BEC Unit and Site Series

BEC Unit / Site Series	TEM Map Code(s)	Ecosystem Name	General Ecosystem Type	# Field Plots	Total # Plants	# Plants (> 25% of Field Plots)	# Plants (> 60% of Field Plots)
Coulter Creek Access Corridor							
CWHwm/04	SD	SsHw - Devil's club	Moist Forest	3	13	13	6
CWHwm/05	SS	Ss - Salmonberry	Floodplain Forest	5	15	11	6
CWHwm/01a*	HB	HwSs - Blueberry	Mesic Forest	4	9	6	4
CWHwm/01b*	HB	HwSs - Blueberry	Mesic Forest	7	6	6	3
Treaty Creek Access Corridor							
ICHvc/03	SD	Sx - Devil's club	Moist Forest	3	14	14	8
ICHvc/01b*	HD	HwBI - Devil's club	Mesic Forest*	7	7	7	3
Mine Site – Sulphurets Creek Watershed							
MHmm2/03	MO	BaHm - Oak fern**	Mesic Forest	12	19	11	7
MHmm2/01	MB	HmBa - Blueberry**	Mesic Forest	12	16	9	4
MHmm2/51 & 00/VG	51 & VG	51: Shrub avalanche track (VG: Valerian - groundsel avalanche track)	Avalanche Track	14	18	11	3
MHmm2/00	MP	Heather heath (parkland ecosystem)	Mesic Shrub / Herb	5	5	5	2
CMAunp/00	KH	Krummholz	Parkland Forest / Krummholz	7	6	3	3
CMAunp/00	AM	Herbaceous meadow	Mesic Herb	5	4	2	1
CMAunp/00	MP	Heather heath	Mesic Shrub / Herb	7	5	2	0
Processing and Tailing Management Area – Treaty Creek and Teigen Creek Watersheds							
ESSFwv/05	FO	BI - Oak fern - Heron's bill	Mesic Forest	10	16	13	8
ESSFwv/07	FV	BI - Valerian - Sickie moss	Wetter Forest	3	10	10	8
ESSFwv/01	FA	BIHm - Azalea	Mesic Forest	10	15	8	7
ESSFwv/06	FD	BI - Devil's club - Lady fern	Wetter Forest	5	19	11	6

(continued)

Table 5-3. Summary of Culturally Important Plants, by BEC Unit and Site Series (completed)

BEC Unit / Site Series	TEM Map Code(s)	Ecosystem Name	General Ecosystem Type	# Field Plots	Total # Plants	# Plants (> 25% of Field Plots)	# Plants (> 60% of Field Plots)
Processing and Tailing Management Area – Treaty Creek and Teigen Creek Watersheds (cont'd)							
ESSFwv/04	MH	BIHm - Heron's bill	Mesic Forest	5	8	7	5
ESSFwv/02	LC	BIPI - <i>Cladonia</i>	Drier Forest	3	8	8	4
ESSFwv/03	FF	BIHm - Feathermoss	Drier Forest	4	11	4	3
ESSFwv/00	AM	Herbaceous meadow	Mesic Herb	4	9	4	2
ESSFwv/51	51	Shrub avalanche track	Avalanche Track	7	15	10	1
BAFAunp/00	KH	Krummholz	Parkland Forest / Krummholz	3	7	7	3
BAFAunp/00	MP	Heather heath	Mesic Shrub / Herb	4	5	3	1

* CWHwm/01a (HB) =Mineral phase of the 01 site series; CWHwm01b (HB) = Lithic phase of the 01 site series; ICHvc/01b (HD) = the 01(2) (BI variation) described within *A Field Guide to Site Identification and Interpretation for the Prince Rupert Forest Region* (Part 1; Banner et al. 1993)

** Ba (amabilis fir) was not observed within KSM Project area.

Table 5-4. Vegetation Loss and Degradation Estimates, by BEC Unit and Site Series

BEC Unit / Site Series	General Ecosystem Type	TEM Map Code(s)	# Plants (> 60% of Field Plots)	Vegetation Loss and Degradation (End of Operation Phase)	
				Loss: Ha (%)	Degradation: Ha (%)
Coulter Creek Access Corridor					
CWHwm/01	Mesic Forest	HB	4	19.2 (1.5)	183.6 (14.6)
CWHwm/04	Moist Forest	SD	6	11.1 (1.4)	106.1 (13.2)
CWHwm/05	Floodplain Forest	SS	6	6.4 (3.0)	34.8 (16.3)
Treaty Creek Access Corridor					
ICHvc/03	Moist Forest	SD	8	25.2 (2.3)	98.6 (9.0)
ICHvc/01	Mesic Forest	HD	3	11.7 (0.9)	67.0 (5.3)

(continued)

**Table 5-4. Vegetation Loss and Degradation Estimates, by BEC Unit and Site Series
(completed)**

BEC Unit / Site Series	General Ecosystem Type	TEM Map Code(s)	# Plants (> 60% of Field Plots)	Vegetation Loss and Degradation (End of Operation Phase)	
				Loss: Ha (%)	Degradation: Ha (%)
Mine Site, Sulphurets Creek Watershed					
MHmm2/51 & /00	Avalanche Track	51 & VG	3	422.7 (34.0)	239.9 (19.2)
MHmm2/03	Mesic Forest	MO	7	230.3 (19.1)	363.9 (30.1)
MHmm2/01	Mesic Forest	MB	4	214.0 (13.0)	457.2 (27.8)
Processing and Tailing Management Area, Treaty Creek and Teigen Creek Watersheds					
ESSFwv/05	Mesic Forest	FO	8	320.6 (26.6)	248.1 (20.6)
ESSFwv/01	Mesic Forest	FA	7	287.6 (14.0)	278.6 (13.6)
ESSFwv/06	Wetter Forest	FD	6	267.4 (22.8)	190.9 (16.2)
ESSFwv/51	Avalanche Track	51	1	203.1 (13.8)	302.1 (20.5)
ESSFwv/07	Wetter Forest	FV	8	155.0 (18.1)	210.7 (24.6)
ESSFwv/00	Mesic Herb	AM	2	102.3 (6.5)	218.7 (14.0)
ESSFwv/02	Drier Forest	LC	4	88.8 (25.2)	70.3 (20.0)
ESSFwv/03	Drier Forest	FF	3	21.4 (4.6)	96.8 (20.8)
ESSFwv/04	Mesic Forest	MH	5	12.7 (8.3)	18.8 (12.2)
Mine Site (Sulphurets Creek Watershed) and Processing and Tailing Management Area (Treaty Creek and Teigen Creek Watersheds)					
BAFA & CMAunp/00	Mesic Shrub / Herb	MP*	1	163.2 (7.7)	236.1 (11.1)
BAFA & CMAunp/00	Parkland Forest / Krummholz	KH*	3	114.4 (5.1)	240.7 (10.8)
BAFA & CMAunp/00	Mesic Herb	AM	1	57.1 (4.4)	149.3 (11.5)

* Includes area mapped within the MHmm2 and ESSwv BEC subzones

Within the ESSFwv BEC subzone, development of the proposed Processing and Tailing Management Area (PTMA) infrastructure could result in losses within nine terrestrial ecosystems that provide culturally important plant species. By area, estimated losses are greatest within the Mesic Forest (621 ha) and Wetter Forest (422 ha) General Ecosystem Types, with slightly lower losses expected within Avalanche Tracks (203 ha).

Smaller vegetation loss and degradation estimates occur within ecosystems in the CWHwm and ICHvc BEC subzones. Within the CWHwm BEC subzone, development of the proposed Coulter Creek Access Corridor could result in losses within three terrestrial ecosystems that provide culturally important plant species. By area, estimated losses are largest within the Mesic Forest (19 ha) General Ecosystem Type. Within the ICHvc BEC subzone, development of the proposed Treaty Creek Access Corridor could result in losses within two terrestrial ecosystems that provide culturally important plant species. By area, estimated losses are largest within the Moist Forest (25 ha) General Ecosystem Type.

6. Discussion

For this assessment, an assumption is made that the number of culturally important plants is related to the potential of an ecosystem to support plants of cultural value. The inclusion of larger datasets, with multiple field plots in every site series, will further increase the reliability of the results. The data in this assessment was originally collected for purposes of TEM and was summarized to provide an estimate of its value in predicting habitats that are likely to contain culturally important plants.

As each of the terrestrial ecosystems in this assessment can be modeled through analysis of the TEM data, the results provide an effective starting point in identifying ecosystems throughout the local and regional study areas that are deemed suitable habitat for culturally important plants.

The greater the difference between the abundance results in Table 5-3 (number of plants within greater than 25% and greater than 60% of the field plots), the more variability can be expected within an individual ecosystem. As discussed previously, within the MHmm2 BEC variant, field plots within the avalanche track ecosystems (14 total plots) resulted in 11 plants species in greater than 25% of the field plots. However, this number dropped to 3 species when assessing the species occurring in greater than 60% of the plots.

The middle to high elevation forests of the ESSFwv BEC subzone provide the best measure of the potential for ecosystems to support culturally important plants, as most of its ecosystems are included in the assessment (exceeding three plots per ecosystem). In this BEC subzone, the Mesic Forest and Wetter Forest General Ecosystem Types had greatest potential to support culturally important plants, with shrub- and herb-dominated ecosystems providing lower potential. Despite fewer ecosystems described by plot data within the MHmm2 BEC variant, the leading General Ecosystem Type is also Mesic Forest, with shrub- and herb-dominated ecosystems providing lower potential.

Although based on fewer numbers of field plots, the Moist Forest and Floodplain Forest General Ecosystem Types (followed closely by Mesic Forest) within the CWHwm and ICHvc BEC subzones - the lowest elevation units within the Project area - appear to have greatest potential to support culturally important plants. At subalpine and alpine elevations in the Project area, the Parkland (Forest) / Krummholz General Ecosystem Type within the CMAunp and BAFAunp BEC units appears to have the greatest potential to support culturally important plants, with shrub-, herb- and sparsely vegetated units providing lower potential.

References

- Banner, A., W. H. MacKenzie, S. Haeussler, S. Thomson, J. Pojar, and R. L. Trowbridge. 1993. *A Field Guide to Site Identification and Interpretation for the Prince Rupert Forest Region*. Land Management Handbook Number 26. Victoria, BC: British Columbia Ministry of Forests and Range, Research Branch.
- British Columbia Ministry of Environment. 2011. VENUS Data Capture Application. <http://www.env.gov.bc.ca/ecology/dteif/venus.html> (accessed August 2012).
- MacKenzie, W. H. 2012. *Biogeoclimatic ecosystem classification of non-forested ecosystems in British Columbia*. Technical Report 068. Prepared by the Province of British Columbia: Victoria, BC.
- Nisga'a Final Agreement. 2001. *Nisga'a Final Agreement*. <http://www.nnkn.ca/files/u28/nis-eng.pdf> (accessed August 2012).
- Rescan 2010. *KSM Project: Nisga'a Nation Desk-based Research Report: Draft Report*. Prepared for Seabridge Gold Inc. by Rescan Environmental Services Ltd.: Vancouver, BC.
- Rescan 2012a. *KSM Project: Gitanyow First Nation Traditional Knowledge and Use Desk-based Research Report*. Prepared for Seabridge Gold Inc. by Rescan Environmental Services Ltd.: Vancouver, BC.
- Rescan 2012b. *KSM Project: Gitksan Nation Traditional Knowledge and Use Desk-based Research Report*. Prepared for Seabridge Gold Inc. by Rescan Environmental Services Ltd.: Vancouver, BC.
- Rescan. 2012c. *KSM Project: Skii km Lax Ha Traditional Knowledge and Use Desk-based Research Report*. Prepared for Seabridge Gold Inc. by Rescan Environmental Services Ltd.: Vancouver, BC.
- Rescan. 2012d. *KSM Project: Tahltan Nation Traditional Knowledge and Use Desk-based Research Report*. Prepared for Seabridge Gold Inc. by Rescan Environmental Services Ltd.: Vancouver, BC.
- Resources Inventory Committee. 1998. *Standard for Terrestrial Ecosystem Mapping in British Columbia*. Prepared by the Ecosystems Working Group, Terrestrial Ecosystems Taskforce, Resources Inventory Committee: Victoria, BC.
- Tahltan Heritage Resources Environmental Assessment Team. 2009. *Tahltan Traditional Use Study - Northwest Transmission Line Project: Interim Report*. Report on file with the British Columbia Environmental Assessment Office: Victoria, BC.

**APPENDIX 1.
CULTURALLY IMPORTANT PLANTS SUMMARY**

Appendix 1. Culturally Important Plants Summary

Plant Species: Common Name(s)	Plant Species: Latin Name(s)	Aboriginal Name(s)	Growth Form	Food	Berry	Medicinal	Construction	Weaving	Various	Dyes	Tahltan Nation	Skii km Lax Ha	Gitanyow Nation and Wii'litswx	Nisga'a Nation	Gitksan Nation	ICHvc	CWHwm	MHm2	ESSFw	CMAunp	BAFAunp	Potential Occurrence / Habitat in the LSA
cottonwood	<i>Populus balsamifera ssp. Trichocarpa</i>		Tree_Deciduous	X												X	X					Floodplains
hemlock	<i>Tsuga spp.</i>		Tree_Conifer								X			X		X	X					Western hemlock is the dominant tree species in lowland areas (CWHwm and ICHvc); mountain hemlock is found at higher elevations (MHm2)
spruce	<i>Picea spp.</i>		Tree_Conifer								X			X		X	X	X	X	X	X	Major tree species in the area
subalpine fir	<i>Abies lasiocarpa</i>		Tree_Conifer								X						X	X	X	X	X	Major tree species in ESSFw
yellow cedar	<i>Chamaecyparis nootkatensis</i>		Tree_Conifer											X	X			X				Uncommon, but perhaps some in high elevation, cold wet forests (MHm2)
mountain alder	<i>Alnus incana</i>		Shrub_Tall			X					X					X	X					Edges of streams, ponds, and other poorly drained sites
willow	<i>Salix spp.</i>		Shrub_Tall				X				X					X	X	X	X	X	X	Common on frequently or recently disturbed sites (lowbench floodplains, base of avalanche tracks) as well as in some non-forested wetlands
red-osier dogwood	<i>Cornus stolonifera</i>		Shrub_Tall	X		X					X					X	X					Wet to mesic streamsides, lakesides, swamps and forests
red elderberry	<i>Sambucus racemosa</i>		Shrub_Tall	X	X									X		X	X	X				Riparian/floodplain areas, avalanche tracks, swampy thickets, moist shaded forests
salmonberry	<i>Rubus spectabilis</i>		Shrub_Tall	X	X						X			X		X	X	X				Moist, rich areas - floodplain and seepage sites, avalanche tracks, early seral sites
devil's club	<i>Oploplanax horridus</i>		Shrub_Tall		X	X					X		X	X	X	X	X	X				Very common throughout (moist to wet forest types, seepage areas, riparian areas)
thimbleberry	<i>Rubus parviflorus</i>		Shrub_Low	X	X									X		X	X	X	X	X	X	Moist to mesic open forests, thickets, streambanks, clearings and roadsides in the lowland to subalpine zones
high-bush cranberry	<i>Viburnum edule</i>	squashberry	Shrub_Low	X	X	X					X	X	X	X	X	X	X	X				Wet to dry forests, bogs and tundra, and riparian areas from lowland to alpine zones
raspberry	<i>Rubus idaeus</i>		Shrub_Low	X	X	X					X			X		X	X	X				Mesic to moist thickets, clearings, burns, old fields and open forests in the lowland and montane zones
rose	<i>Rosa acicularis</i>		Shrub_Low	X							X			X		X	X	X				Thickets, open areas, rocky slopes
gooseberry	<i>Ribes lacustre, R. triste</i>		Shrub_Low	X	X	X								X		X	X	X				Fresh to moist, nitrogen-rich forested areas, floodplains and avalanche tracks

Appendix 1. Culturally Important Plant Species Summary

Plant Species: Common Name(s)	Plant Species: Latin Name(s)	Aboriginal Name(s)	Growth Form	Food	Berry	Medicinal	Construction	Weaving	Various	Dyes	Tahltan Nation	Skii km Lax Ha	Gitanyow Nation and Wii'litswx	Nisga'a Nation	Gitxsan Nation	ICHvc	CWHwm	MHm2	ESSFW	CMAunp	BAFAunp	Potential Occurrence / Habitat in the LSA
black huckleberry	<i>Vaccinium membranaceum</i>		Shrub_Low	X	X						X	X				X	X	X	X	X	X	Dry to moist coniferous forests at low to subalpine elevations
blueberry	<i>Vaccinium spp.</i>		Shrub_Low	X	X						X	X	X	X		X	X	X	X	X	X	Common in understory of coniferous forests, except in very dry or very wet areas
soapberry	<i>Shepherdia canadensis</i>		Shrub_Low	X	X	X					X	X	X		X			X				Low –mid-elevations in dry, coarse-textured sites (open forests and forest edges)
juniper	<i>Juniperus communis</i>		Shrub_Low								X					X	X	X	X	X	X	Bogs and moist to wet forests in the lowland and montane zones
Labrador tea	<i>Ledum groenlandicum</i>		Shrub_Low	X		X					X		X		X	X						
bog cranberry	<i>Oxycoccus oxycoccus</i>		Shrub_Low	X	X									X	X	X	X	X				Commonly associated with certain bogs, as well as some bog-fen transitions
crowberry	<i>Empetrum nigrum</i>		Shrub_Low	X	X								X				X	X	X	X	X	Common in dry alpine and subalpine forests, often surrounding "tree islands" in the parkland
kinnikinnick / bearberry	<i>Arctostaphylos uva-ursi</i>		Shrub_Low	X	X								X		X	X	X	X				
prince's pine	<i>Chimaphila umbellata</i>		Shrub_Low			X					X					X	X					Mesic to dry forests in the montane zone
caribou weed	<i>Artemesia tilesii</i>		Herb_Forb			X					X					X	X	X	X			Moist to mesic meadows, streambanks, gravel bars, rocky slopes and open forests in the lowland and montane to alpine zones
cattail	<i>Typha spp.</i>		Herb_Forb			X		X					X		X	X						Marshes
cow parsnip	<i>Heracleum lanatum / maximum</i>	Indian rhubarb or celery	Herb_Forb	X							X		X		X	X	X	X	X	X	X	Alpine & subalpine meadows, riparian/floodplain areas, avalanche tracks
dandelion	<i>Taraxacum spp.</i>		Herb_Forb	X							X					X	X	X	X			Common dandelion is a weedy species occurring in disturbed species; horned dandelion occurs in moist to dry subalpine and alpine habitats
ferns	Various		Herb_Forb	X				X					X		X	X	X	X				Most common in moist to wet forests, streambanks, thickets, avalanche tracks
fireweed	<i>Epilobium spp.</i>		Herb_Forb	X		X							X		X	X	X	X	X	X	X	Low to subalpine zones on recently disturbed sites (e.g., avalanche tracks) and open meadows and forests
horsetails	<i>Equisetum spp.</i>		Herb_Forb	X		X					X					X	X	X	X			Moist forests, meadows, wet sites in clearings and along streams and rivers, fens, bogs
lamb's quarter	<i>Chenopodium album</i>		Herb_Forb	X							X					X	X					Mesic to dry disturbed sites
mountain sorrel	<i>Oxyria digyna</i>		Herb_Forb	X							X						X	X	X	X	X	Moist rock outcrops, talus and scree slopes, streambanks and snowbed sites from the upper montane to alpine zones
nettles	<i>Urtica dioica, U. gracilis</i>		Herb_Forb	X		X					X		X		X	X	X	X				Moist meadows, streambanks, avalanche tracks
peavine	<i>Lathyrus spp.</i>		Herb_Forb								X					X						Moist to dry open woods, clearings, rocky slopes

Appendix 1. Culturally Important Plants Summary

Plant Species: Common Name(s)	Plant Species: Latin Name(s)	Aboriginal Name(s)	Growth Form	Food	Berry	Medicinal	Construction	Weaving	Various	Dyes	Tahltan Nation	Skii km Lax Ha	Gitanyow Nation and Wii'litwix	Nisga'a Nation	Gitksan Nation	iCHvc	CWHwm	MHm2	ESSFW	CMAunp	BAFAunp	Potential Occurrence / Habitat in the LSA
riceroot / rice lily	<i>Fritillaria camschatcensis</i>													X		X	X	X				Moist meadows, streambanks
skunk cabbage	<i>Lysichiton americanum</i>		Herb_Forb	X										X		X	X					Very wet, swampy areas
twisted stalk	<i>Streptopus roseus,</i>		Herb_Forb		X						X					X	X	X	X			Moist forests, meadows, avalanche tracks
tule (bulrush)	<i>Scirpus spp.</i>		Aquatic					X					X			X	X	X	X			Marshes and shallow water
yellow water/pond lily	<i>Nuphar lutea</i>		Aquatic			X							X		X	X	X	X				Ponds, small lakes, sluggish streams
feather mosses	Various		Moss						X		X				X	X	X	X				Variable; Dry to moist coniferous forests at low to subalpine elevations
<i>Sphagnum</i> moss	<i>Sphagnum spp.</i>		Moss			X			X		X				X	X	X	X				Swamps, fens, bog forests
leafy moss	Various		Moss						X		X				X	X	X	X				Common in moist to wet forested areas
wolf moss / wolf lichen	<i>Letharia vulpina</i>		Moss							X	X		X		X	X	X	X	X	X	X	Growing on coniferous trees

Plants identified as culturally important that are are scarce or not present in the LSA

Aspen	Western red cedar
Birch	Salal
Cherry	Saskatoon
Crabapples	Strawberry
Hawthorne	Lodgepole pine

Wildlife habitat value codes

s	valuable as shelter (limited use)
f	valuable as food (limited use)
S	valuable as shelter (lot of use)
F	valuable as food lot of use)
S (bold type)	valuable as shelter (high use - very important)
F (bold type)	valuable as food (high use - very important)

Appendix 1. Culturally Important Plants Summary

Plant Species: Common Name(s)	Plant Species: Latin Name(s)	Aboriginal Name(s)	Mesic Forest	Drier Forest	Moist Forest	Wetter Forest	Floodplain Forest	Wetland Forest	Parkland Forest/Krummholz	Avalanche Track	Drier Herb	Drier Shrub/Herb	Mesic Herb	Mesic Shrub/Herb	Wetter Herb	Wetter Shrub/Herb	Wetland Shrub/Herb	Sparsely Vegetated	Non-Vegetated	Wildlife Habitat Value	Wildlife Habitat Comments
cottonwood	<i>Populus balsamifera ssp.</i> <i>Trichocarpa</i>					X	X													S f	High value for denning, fisher, black bear, day roosting for bats
hemlock	<i>Tsuga spp.</i>		X	X	X															sf	snow interception cover, litterfall forage for deer, older trees denning by marten, passerine nesting
spruce	<i>Picea spp.</i>		X	X	X	X	X		X											sf	arboreal cover value for marten, squirrel, fisher/cones provide food for passerines
subalpine fir	<i>Abies lasiocarpa</i>		X	X	X	X			X											sf	arboreal cover for marten, squirrel, passerines, etc., cones for birds, foliage for moose, bark eaten by bears
yellow cedar	<i>Chamaecyparis nootkatensis</i>						X													sf	arboreal cover and cones for passerines
mountain alder	<i>Alnus incana</i>						X								X	X	X			sf	security cover, foliage moderate browse value
willow	<i>Salix spp.</i>						X	X		X					X	X	X			s F	high value winter forage for moose and other ungulates, catkins spring bear food
red-osier dogwood	<i>Cornus stolonifera</i>				X	X	X								X					s F	Preferred moose winter forage, also used by other ungulates. Berries valuable fall forage for bears
red elderberry	<i>Sambucus racemosa</i>				X		X			X					X					s F	value as summer and fall forage for bears, berries eaten by passerines
salmonberry	<i>Rubus spectabilis</i>				X	X	X			X					X					s F	valuable bear forage (berries) and winter browse for ungulates
devil's club	<i>Oploplanax horridus</i>		X		X	X	X			X					X					s F	spring summer and fall value (foliage and berries) for bears.
thimbleberry	<i>Rubus parviflorus</i>				X	X	X			X					X					s F	berries valuable for bears, excellent ungulate browse
high-bush cranberry	<i>Viburnum edule</i>	squashberry	X		X	X	X								X					s F	Highly preferred moose winter browse, berries valuable for bears and stay late through winter providing some spring bear value as well as value to wintering passerines
raspberry	<i>Rubus idaeus</i>									X			X	X						s F	valuable bear forage (berries) and winter browse for ungulates
rose	<i>Rosa acicularis</i>			X								X						X		s F	valuable bear forage (berries) and winter browse for deer, rose hips valuable ruffed grouse forage
gooseberry	<i>Ribes lacustre, R. triste</i>		X		X	X				X					X					s F	valuable bear forage (berries) and winter browse for ungulates

Appendix 1. Culturally Important Plant Species Summary

Plant Species: Common Name(s)	Plant Species: Latin Name(s)	Aboriginal Name(s)	Mesic Forest	Drier Forest	Moist Forest	Wetter Forest	Floodplain Forest	Wetland Forest	Parkland Forest/Krummholz	Avalanche Track	Drier Herb	Drier Shrub/Herb	Mesic Herb	Mesic Shrub/Herb	Wetter Herb	Wetter Shrub/Herb	Wetland Shrub/Herb	Sparsely Vegetated	Non-Vegetated	Wildlife Habitat Value	Wildlife Habitat Comments
black huckleberry	<i>Vaccinium membranaceum</i>		X	X	X	X			X											s F	very important bear forage in summer (berries), also browse for ungulates
blueberry	<i>Vaccinium spp.</i>		X	X	X	X	X													s F	very important bear forage in summer (berries), also browse for ungulates
soapberry	<i>Shepherdia canadensis</i>		X	X			X					X								s F	berries used by bear in summer/fall
juniper	<i>Juniperus communis</i>			X					X			X								sf	
Labrador tea	<i>Ledum groenlandicum</i>							X								X					
bog cranberry	<i>Oxycoccus oxycoccus</i>							X								X				f	forage value for bears, grouse
crowberry	<i>Empetrum nigrum</i>			X					X				X							F	valuable fall and spring forage for grizzly bear, also used by ptarmigan
kinnikinnick / bearberry	<i>Arctostaphylos uva-ursi</i>																			f	berries used as forage
prince's pine	<i>Chimaphila umbellata</i>			X								X						X			
caribou weed	<i>Artemesia tilesii</i>												X		X			X		f	
cattail	<i>Typha spp.</i>															X	X			S	cover for waterfowl and amphibians (water level)
cow parsnip	<i>Heracleum lanatum / maximum</i>	Indian rhubarb or celery			X	X				X					X					s F	valuable bear forage, including roots. Browsed by ungulates in spring
dandelion	<i>Taraxacum spp.</i>																			F	spring forage for bears and ungulates
ferns	Various		X		X	X	X			X				X	X					f	some spring forage value, species dependent
fireweed	<i>Epilobium spp.</i>				X					X	X	X	X							s F	valuable spring bear and ungulate forage
horsetails	<i>Equisetum spp.</i>				X	X	X	X		X				X	X	X				s F	very valuable for bears in spring, especially immediately after hibernation
lamb's quarter	<i>Chenopodium album</i>																			s F	valuable spring bear and ungulate forage
mountain sorrel	<i>Oxyria digyna</i>														X		X			f	some use by bears
nettles	<i>Urtica dioica, U. gracilis</i>				X	X	X			X					X					f	some spring forage value
peavine	<i>Lathyrus spp.</i>		X	X	X							X						X		F	bear forage value

Appendix 1. Culturally Important Plants Summary

Plant Species: Common Name(s)	Plant Species: Latin Name(s)	Aboriginal Name(s)	Mesic Forest	Drier Forest	Moist Forest	Wetter Forest	Floodplain Forest	Wetland Forest	Parkland Forest/Krummholz	Avalanche Track	Drier Herb	Drier Shrub/Herb	Mesic Herb	Mesic Shrub/Herb	Wetter Herb	Wetter Shrub/Herb	Wetland Shrub/Herb	Sparsely Vegetated	Non-Vegetated	Wildlife Habitat Value	Wildlife Habitat Comments
riceroot / rice lily	<i>Fritillaria camschatcensis</i>														X					f	bear forage value
skunk cabbage	<i>Lysichiton americanum</i>							X									X	X		F	very high forage value for bears, particularly in spring
twisted stalk tule (bulrush)	<i>Streptopus roseus</i> , <i>Scirpus spp.</i>				X	X	X			X						X				s F	valuable for waterfowl (e.g., geese), bears and moose in spring while still tender. Cover for water birds/amphibians
yellow water/pond lily	<i>Nuphar lutea</i>															X		X		S f	moose summer forage
feather mosses	Various		X	X	X																
<i>Sphagnum</i> moss	<i>Sphagnum spp.</i>							X									X				
leafy moss	Various				X	X	X														
wolf moss / wolf lichen	<i>Letharia vulpina</i>		X	X	X	X				X										F	value as litterfall forage for ungulates

Plants identified as culturally important that are are scarce or not present in the LSA

Aspen	Western red cedar
Birch	Salal
Cherry	Saskatoon
Crabapples	Strawberry
Hawthorne	Lodgepole pine

Wildlife habitat value codes

s	valuable as shelter (limited use)
f	valuable as food (limited use)
S	valuable as shelter (lot of use)
F	valuable as food lot of use)
S (bold type)	valuable as shelter (high use - very important)
F (bold type)	valuable as food (high use - very important)

**APPENDIX 2.
CULTURALLY IMPORTANT PLANTS IN > 60 % OF
FIELD PLOTS, BY BEC UNIT AND SITE SERIES**

Appendix 2. Culturally Important Plants in > 60 % of Field Plots, by BEC Unit and Site Series

BEC Subzone / Variant	Site Series / TEM Map Code	General Ecosystem Type	Common Name	Latin Name	Growth Form
CWHwm	01/HB	Mesic Forest	Western hemlock	<i>Tsuga heterophylla</i>	Tree_Conifer
			Devil's club	<i>Oplopanax horridus</i>	Shrub_Tall
			Blueberry	<i>Vaccinium</i> spp.	Shrub_Low
			Ferns	Various	Herb_For
CWHwm	04/SD	Moist Forest	Western hemlock	<i>Tsuga heterophylla</i>	Tree_Conifer
			Hybrid spruce	<i>Picea</i> sp.	Tree_Conifer
			Devil's club	<i>Oplopanax horridus</i>	Shrub_Tall
			Blueberry	<i>Vaccinium</i> spp.	Shrub_Low
			Ferns	Various	Herb_For
Twistedstalk	<i>Streptopus</i> spp.	Herb_For			
CWHwm	05/SS	Floodplain Forest	Western hemlock	<i>Tsuga heterophylla</i>	Tree_Conifer
			Hybrid spruce	<i>Picea</i> sp.	Tree_Conifer
			Salmonberry	<i>Rubus spectabilis</i>	Shrub_Tall
			Devil's club	<i>Oplopanax horridus</i>	Shrub_Tall
			Ferns	Various	Herb_For
Twistedstalk	<i>Streptopus</i> spp.	Herb_For			
ICHvc	01/HD	Mesic Forest	Subalpine fir	<i>Abies lasiocarpa</i>	Tree_Conifer
			Mountain alder	<i>Alnus incana</i>	Shrub_Tall
			Ferns	Various	Herb_For
ICHvc	03/SD	Moist Forest	Black cottonwood	<i>Populus balsamifera</i> ssp. <i>trichocarpa</i>	Tree_Deciduous
			Subalpine fir	<i>Abies lasiocarpa</i>	Tree_Conifer
			Mountain alder	<i>Alnus incana</i>	Shrub_Tall
			Devil's club	<i>Oplopanax horridus</i>	Shrub_Tall
			Gooseberry, Currant	<i>Ribes</i> spp.	Shrub_Low
			Ferns	Various	Herb_For
			Horsetails	<i>Equisetum</i> spp.	Herb_For
Twistedstalk	<i>Streptopus</i> spp.	Herb_For			
MHmm2	00/51 and 00/VG	Avalanche Track	Mountain alder	<i>Alnus incana</i>	Shrub_Tall
			Ferns	Various	Herb_For
			Willows	<i>Salix</i> spp.	Shrub_Tall
MHmm2	01/MB	Mesic Forest	Hemlock	<i>Tsuga heterophylla</i> , <i>T. Mertensiana</i>	Tree_Conifer
			Subalpine fir	<i>Abies lasiocarpa</i>	Tree_Conifer
			Blueberry, Huckleberry	<i>Vaccinium</i> spp.	Shrub_Low
			Ferns	Various	Herb_For
MHmm2	03/MO	Mesic Forest	Hemlock	<i>Tsuga heterophylla</i> , <i>T. Mertensiana</i>	Tree_Conifer
			Subalpine fir	<i>Abies lasiocarpa</i>	Tree_Conifer
			Devil's club	<i>Oplopanax horridus</i>	Shrub_Tall
			Blueberry, Huckleberry	<i>Vaccinium</i> spp.	Shrub_Low
			Ferns	Various	Herb_For
			Twistedstalk	<i>Streptopus</i> spp.	Herb_For
Leafy Moss	Various	Moss			
ESSFwv	01/FA	Mesic Forest	Subalpine fir	<i>Abies lasiocarpa</i>	Tree_Conifer
			Black huckleberry	<i>Vaccinium membranaceum</i>	Shrub_Low
			Blueberry	<i>Vaccinium</i> spp.	Shrub_Low
			Ferns	Various	Herb_For
			Twistedstalk	<i>Streptopus</i> spp.	Herb_For
			Feather Moss	<i>Pleurozium</i> sp.	Moss
Leafy Moss	Various	Moss			

Appendix 2. Culturally Important Plants in > 60 % of Field Plots, by BEC Unit and Site Series

BEC Subzone / Variant	Site Series / TEM Map Code	General Ecosystem Type	Common Name	Latin Name	Growth Form
ESSFwv	04/MH	Mesic Forest	Hemlock	<i>Tsuga heterophylla</i> , <i>T. Mertensiana</i>	Tree_Conifer
			Subalpine fir	<i>Abies lasiocarpa</i>	Tree_Conifer
			Black huckleberry	<i>Vaccinium membranaceum</i>	Shrub_Low
			Blueberry	<i>Vaccinium</i> spp.	Shrub_Low
			Leafy Moss	Various	Moss
ESSFwv	05/FO	Mesic Forest	Hemlock	<i>Tsuga heterophylla</i> , <i>T. Mertensiana</i>	Tree_Conifer
			Subalpine fir	<i>Abies lasiocarpa</i>	Tree_Conifer
			Black huckleberry	<i>Vaccinium membranaceum</i>	Shrub_Low
			Blueberry	<i>Vaccinium</i> spp.	Shrub_Low
			Ferns	Various	Herb_For
			Twistedstalk	<i>Streptopus</i> spp.	Herb_For
			Feather Moss Leafy Moss	<i>Pleurozium</i> sp. Various	Moss Moss
ESSFwv	02/LC	Drier Forest	Hemlock	<i>Tsuga heterophylla</i> , <i>T. Mertensiana</i>	Tree_Conifer
			Subalpine fir	<i>Abies lasiocarpa</i>	Tree_Conifer
			Black huckleberry	<i>Vaccinium membranaceum</i>	Shrub_Low
			Crowberry	<i>Empetrum nigrum</i>	Shrub_Low
ESSFwv	03/FF	Drier Forest	Hemlock	<i>Tsuga heterophylla</i> , <i>T. Mertensiana</i>	Tree_Conifer
			Subalpine fir	<i>Abies lasiocarpa</i>	Tree_Conifer
			Black huckleberry	<i>Vaccinium membranaceum</i>	Shrub_Low
ESSFwv	06/FD	Wetter Forest	Subalpine fir	<i>Abies lasiocarpa</i>	Tree_Conifer
			Devil's club	<i>Oplopanax horridus</i>	Shrub_Tall
			Black huckleberry	<i>Vaccinium membranaceum</i>	Shrub_Low
			Ferns	Various	Herb_For
			Fireweed Twistedstalk	<i>Epilobium</i> spp. <i>Streptopus</i> spp.	Herb_For Herb_For
ESSFwv	07/FV	Wetter Forest	Hemlock	<i>Tsuga heterophylla</i> , <i>T. Mertensiana</i>	Tree_Conifer
			Subalpine fir	<i>Abies lasiocarpa</i>	Tree_Conifer
			Black huckleberry	<i>Vaccinium membranaceum</i>	Shrub_Low
			Blueberry	<i>Vaccinium</i> spp.	Shrub_Low
			Ferns	Various	Herb_For
			Horsetails	<i>Equisetum</i> spp.	Herb_For
			Twistedstalk Leafy Moss	<i>Streptopus</i> spp. Various	Herb_For Moss
ESSFwv	00/51	Avalanche Track	Ferns	Various	Herb_For
ESSFwv	00/AM	Mesic Herb	Willows	<i>Salix</i> spp.	Shrub_Tall
			Horsetails	<i>Equisetum</i> spp.	Herb_For
BAFAunp / CMAunp	00/MP	Mesic Shrub / Herb	Crowberry	<i>Empetrum nigrum</i>	Shrub_Low
BAFAunp / CMAunp	00/KH	Parkland Forest / Krummholz	Subalpine fir	<i>Abies lasiocarpa</i>	Tree_Conifer
			Black huckleberry	<i>Vaccinium membranaceum</i>	Shrub_Low
			Blueberry	<i>Vaccinium</i> spp.	Shrub_Low
BAFAunp / CMAunp	00/AM	Mesic Herb	Fireweed	<i>Epilobium</i> spp.	Herb_For