

TABLE 5.7.1 Distribution of Flood Site Associations by biogeoclimatic zone

	BG PP	BWBS SWB	ESSF	ICH	IDF	MS	SBPS SBS	CDF	CWH	MH
FI01 Mountain alder – Common horsetail		xxx	x	xx	xx	xx	xxx		x	
FI02 Mountain alder – Red-osier dogwood – Lady fern				xx			xx <sup>w</sup>		x	
FI03 Pacific willow – Red-osier dogwood – Horsetail	x	x			x		x		x	
FI04 Sitka willow – Red-osier dogwood – Horsetail				xx			x <sup>w</sup>		x	
FI05 Drummond's willow – Bluejoint		x		x	x		xxx			
FI06 Sandbar willow	x	x								
FI07 Water birch – Rose	x				x <sup>h</sup>					
Fm01 Cottonwood – Snowberry – Rose	x				xx		x			
Fm02 Cottonwood – Spruce – Red-osier dogwood	x	xx		xx	xx	xx	xx			
Fm03 Cottonwood – Subalpine fir – Devil's club				xx			x <sup>w</sup>			
FI50 Sitka willow – False lily-of-the-valley									x	
FI51 Red alder – Salmonberry – Horsetail								xx	xx	
Fm50 Cottonwood – Red alder – Salmonberry								xx	xx <sup>xoc</sup>	

x = incidental; &lt; 5% of flood sites

w = wet/very wet subzones only

xx = minor; 5–25% of flood sites

h = warm/hot subzones only

xxx = major; &gt;25% of flood sites

xoc = not on outer coast (hypermaritime)

TABLE 5.7.2 Flood Species Importance Table

Species		FI04	FI05	FI06	FI03	FI07	FI01	FI02
<b>Trees</b>								
	<i>Populus balsamifera</i> ssp. <i>trichocarpa</i>			██			██	
	<i>Picea</i> X						██	██
	<i>Abies lasiocarpa</i>							
	<i>Alnus rubra</i>							
	<i>Picea sitchensis</i>							
<b>Shrubs</b>								
	<i>Salix sitchensis</i>	██████						██
	<i>Salix drummondiana</i>	██	██████					
	<i>Salix exigua</i>			██████	██			
	<i>Salix lucida</i>	██			██████			
	<i>Betula occidentalis</i>					██████		
	<i>Salix bebbiana</i>					██		
	<i>Alnus incana</i>	██		██	██████	██	██████	██████
	<i>Cornus stolonifera</i>	███			██████	██	██████	████
	<i>Lonicera involucrata</i>	██	███				██	████
	<i>Rosa woodsii</i>					███		
	<i>Rosa nutkana</i>					██		
	<i>Symphoricarpos albus</i>					██		
	<i>Acer glabrum</i>					██		
	<i>Rosa acicularis</i>		██					
	<i>Oplopanax horridus</i>							
	<i>Rubus parviflorus</i>							██
	<i>Viburnum edule</i>	██						██
	<i>Sambucus racemosa</i>						██	██
	<i>Rubus spectabilis</i>							
	<i>Ribes bracteosum</i>							
<b>Herbs and Dwarf Shrubs</b>								
	<i>Calamagrostis canadensis</i>	██	██████		██		██	██
	<i>Equisetum arvense</i>	███	██		███	██	██████	████
	<i>Equisetum hyemale</i>			███				
	<i>Athyrium filix-femina</i>	██					██	████
	<i>Urtica dioica</i>						██	████
	<i>Heracleum maximum</i>		██				██	██
	<i>Matteuccia struthiopteris</i>							██████
	<i>Poa pratensis</i>					██		
	<i>Osmorhiza berteroi</i>							
	<i>Pyrola asarifolia</i>							
	<i>Actaea rubra</i>							██
	<i>Gymnocarpium dryopteris</i>						██	
	<i>Circaea alpina</i>							██
	<i>Streptopus amplexifolius</i>						██	██
	<i>Aster subspicatus</i>							
	<i>Stachys mexicana</i>							
	<i>Elymus glaucus</i>							
	<i>Maianthemum dilatatum</i>							
<b>Mosses and Lichens</b>								
	<i>Brachythecium</i> spp.	██					██	██
	<i>Mnium</i> spp.	██	██				██	██
	<i>Rhytidiadelphus squarrosus</i>							

*Salix drummondiana* – *Calamagrostis canadensis*

**General Description**

The Drummond's willow – Bluejoint Low Bench Site Association is common at lower elevations throughout the Central Interior, Sub-Boreal Interior, and Northern Boreal Mountains, along small, low-gradient streams. Drummond's willow sites can be deeply flooded during the spring freshet but are much elevated above the mid-season watertable.



*Salix drummondiana* forms a continuous canopy, with other shrubs such as *Lonicera involucrata* occurring in the understorey. In wetter climates, *Spiraea douglasii* may co-dominate on some sites. The herb layer has a high cover of *Calamagrostis canadensis* but is otherwise variably developed, often with open patches of recently deposited fluvial materials. Soils are nearly always silty to fine-sandy textured Cumulic Regosols.

**Characteristic Vegetation**

- Tree layer** (0 - 0 - 2)
- Shrub layer** (40 - 80 - 99)  
*Lonicera involucrata*, *Salix drummondiana*,  
*Spiraea douglasii*
- Herb layer** (4 - 40 - 90)  
*Calamagrostis canadensis*
- Moss layer** (0 - 1 - 40)

**Comments**

This is the most common Low Bench Site Association on small, low-gradient streams in the sub-boreal forests (SBPS, SBS). It also occurs in the ICH, but in these wetter climates the FI04 is more common. It also occurs in the BWBS and IDF.

Low-lying sites adjacent to the FI05 are commonly occupied by Ws04 or Wm02. Sites with more powerful flooding, as indicated by coarse sandy and gravelly soils, are often *Alnus incana*-dominated.

**Wetland Edatopic Grid**

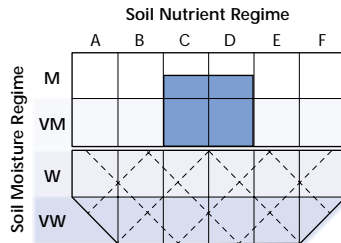


TABLE 5.4.1 Distribution of Swamp Site Associations by biogeoclimatic zone

	BG PP	BWBS SWB	ESSF	ICH	IDF	MS	SBPS SBS	CDF	CWH	MH
Ws01 Mountain alder – Skunk cabbage – Lady fern				XX			XX <sup>w</sup>			
Ws02 Mountain alder – Pink spirea – Sitka sedge		X	X	XX	X	X	X <sup>w</sup>		X	
Ws03 Bebb's willow – Bluejoint	X	XX			XX	X	XX			
Ws04 Drummond's willow – Beaked sedge				X	X	X	XX			
Ws05 MacCalla's willow – Beaked sedge					X		X			
Ws06 Sitka willow – Sitka sedge				XX			X <sup>w</sup>			
Ws07 Spruce – Common horsetail – Leafy moss		XX	X	XX	XX	XX	XXX			
Ws08 Subalpine fir – Sitka valerian – Common horsetail			XX							
Ws09 Black spruce – Skunk cabbage – Peat-moss				XX			X <sup>w</sup>			
Ws10 Western redcedar – Spruce – Skunk cabbage				XX						
Ws11 Spruce – Subalpine fir – Skunk cabbage							X <sup>w</sup>			
Ws50 Pink spirea – Sitka sedge				X			X <sup>w</sup>	XXX	XX	
Ws51 Sitka willow – Pacific willow – Skunk cabbage				X				X	X	
Ws52 Red alder – Skunk cabbage								XX	XX	
Ws53 Western redcedar – Sword fern – Skunk cabbage								X	X <sup>x</sup>	
Ws54 Western redcedar – Western hemlock – Skunk cabbage								X	XX	
Ws55 Yellow-cedar – Mountain hemlock – Skunk cabbage										XX

x = incidental; &lt; 5% of wetlands

w = wet subzones only

xx = minor; 5–25% of wetlands

x = very dry subzones only

xxx = major; &gt;25% of wetlands

TABLE 5.4.2 Swamp Species Importance Table

Species		Ws03	Ws04	Ws05	Ws02	Ws06	Ws07	Ws08	Ws01
Trees	<i>Picea X</i>								
	<i>Picea mariana</i>								
	<i>Abies lasiocarpa</i>								
	<i>Tsuga heterophylla</i>								
	<i>Thuja plicata</i>								
	<i>Picea sitchensis</i>								
	<i>Alnus rubra</i>								
	<i>Acer macrophyllum</i>								
	<i>Chamaecyparis nootkatensis</i>								
	<i>Tsuga mertensiana</i>								
	<i>Abies amabilis</i>								
	Shrubs	<i>Salix bebbiana</i>							
<i>Salix drummondiana</i>									
<i>Salix maccalliana</i>									
<i>Alnus incana</i>									
<i>Lonicera involucrata</i>									
<i>Spiraea douglasii</i>									
<i>Cornus stolonifera</i>									
<i>Vaccinium alaskaense/ovalifolium</i>									
<i>Salix sitchensis</i>									
<i>Salix lucida</i>									
<i>Rubus spectabilis</i>									
<i>Sambucus racemosa</i>									
<i>Gaultheria shallon</i>									
<i>Ribes bracteosum</i>									
<i>Elliottia pyroliflorus</i>									
Herbs and Dwarf Shrubs	<i>Calamagrostis canadensis</i>								
	<i>Carex aquatilis/sitchensis</i>								
	<i>Carex utriculata</i>								
	<i>Gymnocarpium dryopteris</i>								
	<i>Valeriana sitchensis</i>								
	<i>Scirpus microcarpus</i>								
	<i>Equisetum arvense</i>								
	<i>Lysichiton americanus</i>								
	<i>Athyrium filix-femina</i>								
	<i>Tiarella trifoliata</i>								
	<i>Streptopus lanceolatus</i>								
	<i>Maianthemum dilatatum</i>								
	<i>Oenanthe sarmentosa</i>								
	<i>Polystichum munitum</i>								
	<i>Equisetum telmateia</i>								
	<i>Blechnum spicant</i>								
	<i>Veratrum viride</i>								
	<i>Fauria crista-galli</i>								
Mosses and Lichens	<i>Drepanocladus</i> spp.								
	<i>Mnium</i> spp.								
	<i>Aulacomnium palustre</i>								
	<i>Sphagnum</i> spp.								
	<i>Hylocomium splendens</i>								
	<i>Pleurozium schreberi</i>								
	<i>Eurhynchium praelongum</i>								
	<i>Rhytidiadelphus loreus</i>								

*Salix sitchensis* – *Carex sitchensis*

### General Description

Sitka willow – Sitka sedge swamps are uncommon at low elevations in the Coast and Mountains, Nass Basin, and wet subzones of the Southern Interior Mountains and Sub-Boreal Interior. These sites are usually associated with fluvial systems or linked basins and experience prolonged saturation and brief early-season flooding.

*Salix sitchensis* dominates **Ws06** sites. The herb layer is primarily *Carex sitchensis* and *Equisetum arvense*. Other large sedges and forbs are also common. On some sites, particularly those under shade, *Scirpus microcarpus* replaces *C. sitchensis* as the site dominant. The moss layer is poorly developed.

Gleysols derived from fluvial materials are the most common soil type. On some sites, sedge peat is layered in fluvial deposits.



### Characteristic Vegetation

**Tree layer** (0 - .2 - 2)

**Shrub layer** (15 - 50 - 90)

*Alnus incana*, *Salix sitchensis*

**Herb layer** (30 - 74 - 99)

*Calamagrostis canadensis*, *Carex sitchensis*,

*C. utriculata*, *Equisetum arvense*,

*Scirpus microcarpus*

**Moss layer** (2 - 8 - 35)

*Mnium* spp.

### Comments

Adjacent communities are often *Wm01* or *Wm02* marshes or low bench flood communities. This Site Association is similar to the *Ws04* and *Ws02*; the former occurs in drier subzones and the latter on more active flood-plain sites.

*Sitka willow* is well adapted to fluvial sites; twigs and branches have brittle bases that readily break during flood events. These whips will readily root in mineral soils.

### Wetland Edatopic Grid

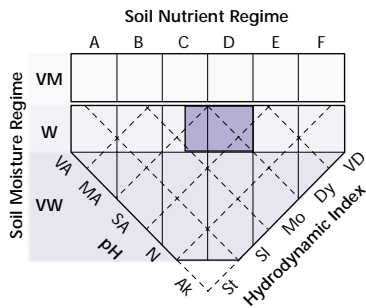


TABLE 5.2.1 Distribution of Fen Site Associations by biogeoclimatic zone

	BG PP	BWBS SWB	ESSF	ICH	IDF	MS	SBPS SBS	CDF	CWH	MH
<b>Wf01</b> Water sedge – Beaked sedge		xx	x	xx	xxx	xxx	xxx		x <sup>i</sup>	
<b>Wf02</b> Scrub birch – Water sedge		xxx	x	xx	xx	xx	xx			
<b>Wf03</b> Water sedge – Peat-moss			xx				x			
<b>Wf04</b> Barclay's willow – Water sedge – Glow mosses		x	xxx			x	x			
<b>Wf05</b> Slender sedge – Common hook-moss		x		xx	xx	xx	xx			
<b>Wf06</b> Slender sedge – Buckbean		x		x	x		x			
<b>Wf07</b> Scrub birch – Buckbean – Shore sedge		x		x	x		x			
<b>Wf08</b> Shore sedge – Buckbean – Hook-moss		x	x		x	x	x			
<b>Wf09</b> Few-flowered spike-rush – Hook-moss			x			x	x			
<b>Wf10</b> Hudson Bay clubrush – Red hook-moss							x			
<b>Wf11</b> Tufted clubrush – Star moss		x	x	x		x	x			
<b>Wf12</b> Narrow-leaved cotton-grass – Marsh-marigold			xxx							
<b>Wf13</b> Narrow-leaved cotton-grass – Shore sedge			xx			x				
<b>Wf50</b> Narrow-leaved cotton-grass – Peat-moss									x	xxx
<b>Wf51</b> Sitka sedge – Peat-moss				x				xx	xx	
<b>Wf52</b> Sweet gale – Sitka sedge								xx	xx <sup>s</sup>	
<b>Wf53</b> Slender sedge – White beak-rush								x	xx <sup>s</sup>	

x = incidental; &lt; 5% of wetlands

i = inland areas only

xx = minor; 5–25% of wetlands

s = southern subzones only

xxx = major; &gt;25% of wetlands

TABLE 5.2.2 Fen Species Importance Table

Species		WF01	WF02	WF03	WF04	WF05	WF06	WF07	WF08
Shrubs	<i>Betula nana</i>								
	<i>Salix barclayi</i>								
	<i>Salix pedicellaris</i>								
	<i>Spiraea douglasii</i>								
	<i>Myrica gale</i>								
Herbs and Dwarf Shrubs	<i>Carex utriculata</i>								
	<i>Carex aquatilis</i>								
Shrubs	<i>Comarum palustre</i>								
	<i>Calamagrostis canadensis</i>								
Shrubs	<i>Carex lasiocarpa</i>								
	<i>Menyanthes trifoliata</i>								
Shrubs	<i>Carex limosa</i>								
	<i>Carex chordorrhiza</i>								
Shrubs	<i>Eleocharis quinqueflora</i>								
	<i>Trichophorum alpinum</i>								
Shrubs	<i>Trichophorum cespitosum</i>								
	<i>Eriophorum angustifolium</i>								
Shrubs	<i>Caltha leptosepala</i>								
	<i>Carex anthoxanthea</i>								
Shrubs	<i>Equisetum fluviatile</i>								
	<i>Carex magellanica</i>								
Shrubs	<i>Carex sitchensis</i>								
	<i>Rhynchospora alba</i>								
Shrubs	<i>Carex livida</i>								
	<i>Eriophorum chamissonis</i>								
Shrubs	<i>Vahlodea atropurpurea</i>								
	<i>Drosera anglica</i>								
Shrubs	<i>Hypericum anagalloides</i>								
	<i>Triantha glutinosa</i>								
Shrubs	<i>Schoenoplectus tabernaemontani</i>								
	<i>Fauria crista-galli</i>								
Shrubs	<i>Senecio triangularis</i>								
	<i>Andromeda polifolia</i>								
Shrubs	<i>Kalmia microphylla</i>								
	<i>Oxycoccus oxycoccus</i>								
Shrubs	<i>Triglochin maritima</i>								
	<i>Drosera rotundifolia</i>								
Shrubs	<i>Leptarrhena pyrolifolia</i>								
	<i>Platanthera dilatata</i>								
Shrubs	<i>Sanguisorba canadensis</i>								
	<i>Utricularia intermedia</i>								
Shrubs	<i>Viola palustris</i>								
	<i>Sphagnum</i> Group I								
Lichens and Mosses	<i>Aulaconnium palustre</i>								
	<i>Drepanocladus</i> spp.								
Lichens and Mosses	<i>Sphagnum</i> Group II								
	<i>Tomentypnum nitens</i>								
Lichens and Mosses	<i>Philonotis fontana</i>								
	<i>Calliergon stramineum</i>								
Lichens and Mosses	<i>Scorpidium</i> spp.								
	<i>Campyllum stellatum</i>								
Lichens and Mosses	<i>Warnstorfia</i> spp.								
	<i>Meesia triquetra</i>								



*Carex aquatilis* – *Carex utriculata*

**General Description**

The Water sedge – Beaked sedge Fen Site Association is the most common and widespread Fen Site Association in the province. It occurs in all but the warmest and driest subzones from low to subalpine elevations on sites that are annually inundated by shallow, low-energy flood waters and that experience some late-season drawdown.



**Wf01** fens are found in a wide variety of landscape positions but most commonly palustrine basins. They occupy wetter zones in larger peatland complexes but also form extensive pure “meadows.”



Species diversity is low; *Carex*

*aquatilis* and *Carex utriculata* cover is often continuous, with scattered forbs, aquatics, and mosses in the understorey. On sites that dry out at the surface, *Calamagrostis canadensis* or *C. stricta* can become prominent, species diversity increases, and sites become more meadow-like.

Peat depths range from 30 to > 300 cm. Common soil types include typic and terric Fibrisols and Mesisols. This Site Association tolerates variable hydrology.

**Characteristic Vegetation**

- Tree layer (0 - 0 - 0)
- Shrub layer (0 - 0 - 10)
- Herb layer (13 - 80 - 100)
- Carex aquatilis*, *C. utriculata*
- Moss layer (0 - 5 - 100)
- Drepanocladus aduncus*

**Comments**

Sites dominated by *C. utriculata* and *C. aquatilis* but with mineral or humic soils are described by the **Wm01**. Because **Wf01** and **Wm01** sites are species-poor and the two dominant sedge species have a wide ecological amplitude, the plant community poorly differentiates between sites on peat (**Wf01**) and those on mineral soil (**Wm01**). **Wf01** sites typically have less *C. utriculata* and fewer aquatics than **Wm01** sites. The **Wf01** develops from the **Wm01** in most circumstances.

Sites that are drier or at least have more pronounced microtopography than the **Wf01** are usually occupied by communities with low shrubs and high moss cover (most commonly, the **Wf02**). However, at higher elevations few shrubs occur and only moss cover increases (**Wf03**). Sites with greater waterflow are characterized by tall-shrub swamps dominated by willows or alders, and water sedges, and have mineral or humic peat soils.

**Wetland Edatopic Grid**

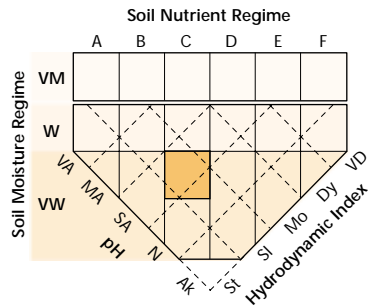


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	BG PP	BWBS SWB	ESSF	ICH	IDF	MS	SBPS SBS	CDF	CWH	MH
Wf01 Water sedge – Beaked sedge		xx	x	xx	xxx	xxx	xxx		x <sup>i</sup>	
Wf02 Scrub birch – Water sedge		xxx	x	xx	xx	xx	xx			
Wf03 Water sedge – Peat-moss			xx				x			
Wf04 Barclay's willow – Water sedge – Glow mosses		x	xxx			x	x			
Wf05 Slender sedge – Common hook-moss		x		xx	xx	xx	xx			
Wf06 Slender sedge – Buckbean		x		x	x		x			
Wf07 Scrub birch – Buckbean – Shore sedge		x		x	x		x			
Wf08 Shore sedge – Buckbean – Hook-moss		x	x		x	x	x			
Wf09 Few-flowered spike-rush – Hook-moss			x			x	x			
Wf10 Hudson Bay clubrush – Red hook-moss							x			
Wf11 Tufted clubrush – Star moss		x	x	x		x	x			
Wf12 Narrow-leaved cotton-grass – Marsh-marigold			xxx							
Wf13 Narrow-leaved cotton-grass – Shore sedge			xx			x				
Wf50 Narrow-leaved cotton-grass – Peat-moss									x	xxx
Wf51 Sitka sedge – Peat-moss				x				xx	xx	
Wf52 Sweet gale – Sitka sedge								xx	xx <sup>s</sup>	
Wf53 Slender sedge – White beak-rush								x	xx <sup>s</sup>	

x = incidental; &lt; 5% of wetlands

i = inland areas only

xx = minor; 5–25% of wetlands

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TABLE 5.2.2 Fen Species Importance Table

Species		WF01	WF02	WF03	WF04	WF05	WF06	WF07	WF08
Shrubs	<i>Betula nana</i>								
	<i>Salix barclayi</i>								
	<i>Salix pedicularis</i>								
	<i>Spiraea douglasii</i>								
	<i>Myrica gale</i>								
Herbs and Dwarf Shrubs	<i>Carex utriculata</i>								
	<i>Carex aquatilis</i>								
Shrubs	<i>Comarum palustre</i>								
	<i>Calamagrostis canadensis</i>								
Shrubs	<i>Carex lasiocarpa</i>								
	<i>Menyanthes trifoliata</i>								
Shrubs	<i>Carex limosa</i>								
	<i>Carex chordorrhiza</i>								
Shrubs	<i>Eleocharis quinqueflora</i>								
	<i>Trichophorum alpinum</i>								
Shrubs	<i>Trichophorum cespitosum</i>								
	<i>Eriophorum angustifolium</i>								
Shrubs	<i>Caltha leptosepala</i>								
	<i>Carex anthoxanthea</i>								
Shrubs	<i>Equisetum fluviatile</i>								
	<i>Carex magellanica</i>								
Shrubs	<i>Carex sitchensis</i>								
	<i>Rhynchospora alba</i>								
Shrubs	<i>Carex livida</i>								
	<i>Eriophorum chamissonis</i>								
Shrubs	<i>Vahlodea atropurpurea</i>								
	<i>Drosera anglica</i>								
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	<i>Triantha glutinosa</i>								
Shrubs	<i>Schoenoplectus tabernaemontani</i>								
	<i>Fauria crista-galli</i>								
Shrubs	<i>Senecio triangularis</i>								
	<i>Andromeda polifolia</i>								
Shrubs	<i>Kalmia microphylla</i>								
	<i>Oxycoccus oxycoccus</i>								
Shrubs	<i>Triglochin maritima</i>								
	<i>Drosera rotundifolia</i>								
Shrubs	<i>Leptarrhena pyrolifolia</i>								
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Shrubs	<i>Sanguisorba canadensis</i>								
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Shrubs	<i>Viola palustris</i>								
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Lichens and Mosses	<i>Aulaacomnium palustre</i>								
	<i>Drepanocladus</i> spp.								
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Lichens and Mosses	<i>Philonotis fontana</i>								
	<i>Calliergon stramineum</i>								
Lichens and Mosses	<i>Scorpidium</i> spp.								
	<i>Campylopus stellatum</i>								
Lichens and Mosses	<i>Warnstorfia</i> spp.								
	<i>Meesia triquetra</i>								

*Salix barclayi* – *Carex aquatilis* – *Aulacomnium palustre*



### General Description

Barclay's willow – Water sedge – Glow moss fen/swamps are common at subalpine elevations of the Sub-Boreal Interior, Southern Interior Mountains, and Northern Boreal Mountains. They occur on subalpine seepage slopes, along glacier-fed creeks, and in frost-prone basins.

*Salix barclayi* dominates the shrub layer with a scattering of other low shrub species. *Carex aquatilis* dominates the herb layer but is often accompanied by scattered high-elevation species such as *Caltha leptosepala*, *Eriophorum angustifolium*, and *Leptarrhena pyrolifolia*. The moss layer can be absent or moderately well developed.



Continuous (often copious) groundwater or snowmelt seepage is typical, and soils are cold. Peat is often shallow because of low biomass production but occasionally deep sedge peat deposits are encountered. Common soil types include terric Mesisols, Humisols, and Fibrisols

### Characteristic Vegetation

**Tree layer** (0 - .5 - 3)

**Shrub layer** (10 - 35 - 95)

*Salix barclayi*

**Herb layer** (26 - 65 - 99)

*Calamagrostis canadensis*, *Carex aquatilis*,  
*C. sitchensis*

**Moss layer** (0 - 15 - 95)

*Aulacomnium palustre*, *Mnium* spp.,  
*Philonotis fontana*

### Comments

Wf04 can occur alone or surrounding sedge or cotton-grass fens (Wf03 or Wf12), or in wet depressions within forb-rich subalpine meadows or carrs. The similar Sc03 is also common at high elevations in the Interior. However, the Sc03's low shrub physiognomy is the result of cold-air drainage not wet soils, and it is characterized by subalpine forbs with few hydrophytes.

### Wetland Edatopic Grid

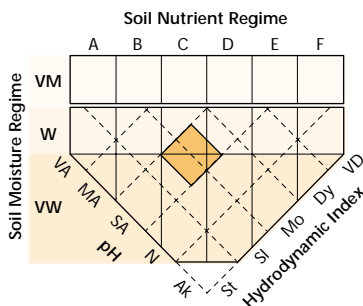


TABLE 5.3.1 Distribution of Marsh Site Associations by biogeoclimatic zone

	BG PP	BWBS SWB	ESSF	ICH	IDF	MS	SBPS SBS	CDF	CWH	MH
Wm01 Beaked sedge – Water sedge	x	xx	x	xxx	xxx	xx	xx		x	
Wm02 Swamp horsetail – Beaked sedge		x		x	x	x	xx			
Wm03 Awned sedge	x				x					
Wm04 Common spike-rush	x	x		xx	x	x	xx		x	
Wm05 Cattail	xxx	x		xx	xx	x	xx	xx	x <sup>s</sup>	
Wm06 Great bulrush	xxx	x		x	xx	xx	x	x	x	
Wm07 Baltic rush	x				xx					
Wm50 Sitka sedge – Hemlock-parsley								xx	xx	
Wm51 Three-way sedge				x				x	x	

x = incidental; &lt; 5% of wetlands

xx = minor; 5–25% of wetlands

xxx = major; &gt;25% of wetlands

s = southern subzones only

TABLE 5.3.2 Marsh Species Importance Table

Species		Wm01	Wm02	Wm03	Wm04	Wm05
Herbs and Dwarf Shrubs	<i>Carex utriculata</i>					
	<i>Carex aquatilis</i>					
	<i>Equisetum fluviatile</i>					
	<i>Comarum palustre</i>					
	<i>Sium suave</i>					
	<i>Carex exsiccata</i>					
	<i>Carex atherodes</i>					
	<i>Polygonum amphibium</i>					
	<i>Eleocharis palustris</i>					
	<i>Potamogeton richardsonii</i>					
	<i>Typha latifolia</i>					
	<i>Schoenoplectus acutus</i>					
	<i>Menyanthes trifoliata</i>					
	<i>Utricularia macrorhiza</i>					
	<i>Juncus balticus</i>					
	<i>Hordeum jubatum</i>					
	<i>Potentilla anserina</i>					
	<i>Calamagrostis canadensis</i>					
	<i>Cicuta douglasii</i>					
	<i>Lysichiton americanus</i>					
	<i>Oenanthe sarmentosa</i>					
	<i>Galium trifidum</i>					
	<i>Spiraea douglasii</i>					
	<i>Carex sitchensis</i>					
	<i>Nuphar lutea</i> ssp. <i>polysepala</i>					
	<i>Dulichium arundinaceum</i>					
Mosses	<i>Drepanocladus</i> spp.					
	<i>Wamstorfia</i> spp.					

*Equisetum fluviatile* – *Carex utriculata*

### General Description

The Swamp horsetail – Beaked sedge Marsh Site Association is uncommon at lower elevations throughout the Interior. Common locations are in back-levee depressions along sediment-laden, low-gradient streams, protected bays of large lakes, or hydrologically modified (flooded) fens. The **Wm02** also occurs along the Coast in tidal reaches of large rivers above saltwater influence.

Plant diversity is low. Sites are dominated by *Equisetum fluviatile* with *Carex utriculata* sometimes co-dominating; often there are scattered aquatics such as *Potamogeton* and *Myriophyllum* spp. The **Wm02** is similar to the **Wm01** but is distinguished by its higher hydrodynamic index and by the dominance of *E. fluviatile*.



Soils are derived from silty or fine-sandy fluvium, deep limnic deposits at open margins of lakes, or recently flooded peat. Rego Gleysols and Terric Humisols are common soil types.

### Characteristic Vegetation

**Tree layer** (0 - 0 - 0)

**Shrub layer** (0 - 0 - 4)

**Herb layer** (18 - 85 - 100)

*C. utriculata*, *Equisetum fluviatile*

**Moss layer** (0 - 0 - 90)

### Comments

*E. fluviatile* is tolerant of extreme variations in water depth and high rates of sedimentation and can colonize exposed mineral or peat soils. It has been used to revegetate the extreme environment of the drawdown zone in reservoirs.

On fluvial sites, the **Wm02** is usually adjacent to tall-willow swamps or low bench communities. In lake systems, **Wm02** commonly adjoins open water and other marsh communities.

### Wetland Edatopic Grid

