

BGxh3

BUNCHGRASS VERY DRY HOT SUBZONE

FRASER VARIANT

The BGxh3 is a relatively small (269 km²) variant located almost entirely within the Cariboo Forest Region. It includes the lower slopes and terraces of the Fraser River valley south from the confluence of the Chilcotin River to about the border with the Kamloops Forest Region, where it is replaced by the **BGxh2**. Elevations are from valley bottom (approximately 500 m) to approximately 650 m.

Distinguishing Adjacent Units from the BGxh3

The **BGxw2** occurs at elevations above the BGxh3 throughout most of its distribution. South of Big Bar Creek, however, the **IDF_{xw}** borders the upper elevations of the BGxh3. In this area, the BGxw2, which normally lies above the BGxh3, is pinched out due to the steep slopes on the west side of the Edge Hills.

In the **BGxw2**, climax vegetation on zonal sites has:

- little or no big sagebrush;
- less prickly pear cactus;
- smaller relative abundance of junegrass;
- greater relative abundance of needle-and-thread grass;
- greater diversity and total cover of vascular plants.

moist sites have:

- frequent porcupine grass and occasional spreading needlegrass.

In the **IDF_{xw}**, zonal sites have:

- Douglas-fir forests as climax vegetation;
- common pinegrass, soopolallie, and kinnikinnick.

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 ^s	
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; < 5% of wetlands

xx = minor; 5–25% of wetlands

xxx = major; >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

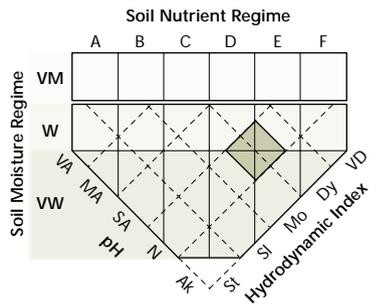


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Wm02 Swamp horsetail – Beaked sedge		x		x	x	x	xx			
Wm03 Awned sedge	x				x					
Wm04 Common spike-rush	x	x		xx	x	x	xx		x	
Wm05 Cattail	xxx	x		xx	xx	x	xx	xx	x ^s	
Wm06 Great bulrush	xxx	x		x	xx	xx	x	x	x	
Wm07 Baltic rush	x				xx					
Wm50 Sitka sedge – Hemlock-parsley								xx	xx	
Wm51 Three-way sedge				x				x	x	

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	<i>Nuphar lutea</i> ssp. <i>polysepala</i>					
	<i>Dulichium arundinaceum</i>					
Mosses	<i>Drepanocladus</i> spp.					
	<i>Wamstorfia</i> spp.					

Typha latifolia

General Description

Cattail marshes are common throughout the Coast and Interior at low elevations in subzones with warm summers. They occur most commonly in protected lake embayments and potholes or even roadside ditches, where the surface substrate remains saturated for most of the growing season.

Typha latifolia dominates, often with few other rooted plants present, especially where nutrient levels are high and *T. latifolia* growth profuse. Occasionally there is significant cover of *Carex utriculata*, *Schoenoplectus acutus*, or *Lemna* spp.

These sites often have organic veneers of well-decomposed, odiferous muck. Soil types can be Humisols or Humic Gleysols. Water depths may be up to 1 m in the spring but recede in late summer, sometimes to the surface.



Characteristic Vegetation

- Tree layer (0 - 0 - 0)
- Shrub layer (0 - 0 - 10)
- Herb layer (40 - 80 - 100)
- Typha latifolia*
- Moss layer (0 - 0 - 90)

Comments

Typha latifolia effectively turns high nutrient levels (N and P) into biomass and often dominates wetlands experiencing nutrient loading. Addition of agricultural or human waste to most wetlands will lead to an increase and eventual dominance by *T. latifolia* if climatic conditions are favourable. Initial *T. latifolia* establishment requires substrate exposure for seedling establishment and germination, though once established it spreads extensively by rhizomes so that large stands may consist of only a few individual plants.

Similar sites with more dynamic hydrology or lower N and P are usually occupied by Wm06. Patches of *S. acutus* in Wm05 marshes can be a result of intensive grazing by Muskrat. *S. acutus* stores nutrients in the root mass and can more rapidly recover from removal of its stem than can *T. latifolia*.

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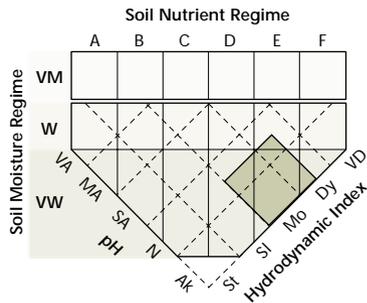


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Wm03 Awned sedge	x				x					
Wm04 Common spike-rush	x	x		xx	x	x	xx		x	
Wm05 Cattail	xxx	x		xx	xx	x	xx	xx	x ^s	
Wm06 Great bulrush	xxx	x		x	xx	xx	x	x	x	
Wm07 Baltic rush	x				xx					
Wm50 Sitka sedge – Hemlock-parsley								xx	xx	
Wm51 Three-way sedge				x				x	x	

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	<i>Wamstorfia</i> spp.					

Wm06	Wm07	Wm50	Wm51	Common Name
				beaked sedge
				water sedge
				swamp horsetail
				marsh cinquefoil
				hemlock water-parsnip
				inflated sedge
				awned sedge
				water smartweed
				common spike-rush
				Richardson's pondweed
				common cattail
				great bulrush
				buckbean
				greater bladderwort
				Baltic rush
				foxtail barley
				common silverweed
				bluejoint
				Douglas' water-hemlock
				skunk cabbage
				Pacific water-parsley
				small bedstraw
				pink spirea
				Sitka sedge
				yellow pond-lily
				three-way sedge
				hook-mosses: intermediate
				hook-mosses: poor

