

ORIGINAL PURPOSE To preserve floodplain cottonwood stands for purposes of hybridization and stock improvement

CURRENT PURPOSE To preserve floodplain cottonwood stands and associated natural values in the lower Squamish River valley. Associated values include significant levels of use by wintering bald eagles

OVERVIEW

Date established:	4 Dec. 1975	Location:	In Squamish River, 10 km N of Squamish
ORC #:	3069	Latitude:	49°46'N
Map number:	92 G/14	Longitude:	123°10'W

Total Area:	71 ha	Elevation:	10 m
Land:	71 ha		

Access: Access by boat across Squamish River

Biogeoclimatic Zone:	Coastal Western Hemlock (CWH)
Biogeoclimatic Variant:	CWHdm Dry Maritime
Ecosection:	Southern Pacific Ranges
Region:	Lower Mainland
Management Area:	Squamish

COMPOSITION

Physical: The reserve is an island on the Squamish River floodplain, surrounded by mountains of the Coast Range which rise to over 2000 m. Baynes Island is located where the active, high-gradient Cheakamus River enters the lower gradient Squamish (1.25 m/km) and deposits much of its coarse-grained bedload. The Squamish River is subjected to extreme variations in flow, the lowest recorded daily flow (11 m³/s) being 200 times less than the maximum daily flow (2240 m³/s). Rainfall and snowmelt events result in frequent flooding of valley bottom lands, and in erosion and deposition of material. The highest mean monthly flows are normally in June, the lowest in March. Baynes Island soils are largely poorly developed Regosols on alluvial deposits. Local climatic events include fall and winter storms funnelled up Howe Sound between high mountains, strong outflow winds ("Squamish winds") in winter, and summertime convective showers.

Biological: Baynes Island, except for narrow gravel bars at its perimeter, is completely forested. One community of shrubs and four forest communities have been described. Shrub stands, of limited extent, are dominated by the tall shrubs Pacific willow and Pacific ninebark. Black cottonwood-red alder woods, with an understory of salmonberry and red-osier dogwood, cover much of the island. On drier sites the cottonwood stands contain bigleaf and vine maples, and hazelnut is a common understory shrub. Lastly, wet depressions support red alder trees in association with red-osier dogwood, skunk cabbage, and water-parsley. Additional trees recorded on the island are grand fir, Sitka spruce, and western

redcedar. Four species of ferns and seven of mosses have been noted.

A variety of birds, including warblers, thrushes, wrens, woodpeckers, chickadees, juncos, and kinglets has been observed in the reserve.

Cultural: Reserve resides in traditional Squamish Nation territory.
The area is used by Squamish Nation for traditional salmon harvest.

MANAGEMENT CONCERNS

SIGNIFICANT SPECIES	BC LIST STATUS	COSEWIC STATUS	CF PRIORITY
Grizzly Bear	Blue listed	Special Concern (2002)	2
Bald Eagle		Not At Risk (1984)	6
black cottonwood			6

THREATS

Climate Change: Glaciers in British Columbia are projected to continue to melt as the temperatures continue to climb in future years. The Squamish River is fed by glacial meltwater, and as such may be subject to increased flooding and subsequent erosion of its banks, including the banks surrounding this reserve. Habitat loss and changed hydrology may result.

Storms are also projected to increase in frequency and intensity. The storms that funnel up from Howe Sound and the strong “Squamish winds” could increase, possibly resulting in increased levels of disturbance on the island.

Access: Boat access and associated recreational use such as canoeing, hiking, birding, fishing disrupts the wildlife, primarily Bald Eagles.

Forestry: Private property that border the reserve was logged which may effect the hydrology and associated salmon habitat as well as disturb the wintering Bald Eagles.

Geological processes: Habitat loss is resulting from increased flooding of the Squamish River.

Other industry: An independent power project is planned for the south of the reserve making the reserve a potential corridor which poses a direct threat to the integrity of the ecosystem.

Utilities and utility corridors: Habitat loss will result if BC Hydro requires trimming of vegetation beneath and around power lines.

RESEARCH OPPORTUNITIES Changes in stream flow and timing related to extent of glaciers in watershed as this changes with climate change.

SCIENTIFIC NAMES OF SPECIES MENTIONED IN THE BAYNES ISLAND ER ACCOUNT

Flora

alder, red (*Alnus rubra*)
cabbage, skunk (*Lysichiton americanus*)
cottonwood, black (*Populus trichocarpa* ssp. *trichocarpa*)
dogwood, red-osier (*Cornus stolonifera*)
fir, grand (*Abies grandis*)
hazelnut, beaked (*Corylus cornuta*)
maple, bigleaf (*Acer macrophyllum*)
maple, vine (*Acer circinatum*)
ninebark, Pacific (*Physocarpus capitatus*)
redcedar, western (*Thuja plicata*)
salmonberry (*Rubus spectabilis*)
spruce, Sitka (*Picea sitchensis*)
water-parsley, Pacific (*Oenanthe sarmentosa*)
willow, Pacific (*Salix lucida* ssp. *lasiandra*)

Fauna

Bear, Grizzly (*Ursus arctos*)
Chickadee (*Poecile* spp.)
Eagle, Bald (*Haliaeetus leucocephalus*)
Junco, Dark-eyed (*Junco hyemalis*)
Kinglet (*Regulus* spp.)