

**ORIGINAL PURPOSE** To protect unique hot spring, river bank, and forest environments along the Liard River

#### OVERVIEW

<b>Date established:</b>	29 June 2000	<b>Location:</b>	110 km SE of Watson Lake
<b>ORC #:</b>	4232	<b>Latitude:</b>	59°38'N
<b>Map number:</b>	94 M/66	<b>Longitude:</b>	126°54'W

<b>Total Area:</b>	724 ha	<b>Elevation:</b>	600 m
<b>Land:</b>	724 ha		

**Access:** Accessible via the Alaskan Highway.

<b>Biogeoclimatic Zone:</b>	Boreal White and Black Spruce (BWBS)
<b>Biogeoclimatic Variant:</b>	BWBSdk2 Liard Dry Cool
<b>Ecosection:</b>	Liard Plain
<b>Region:</b>	Peace
<b>Management Area:</b>	Liard

#### COMPOSITION

**Physical:** Located between the Alaska highway and the Liard River, immediately east of the Coal River, the reserve faces Portage Brule Rapids, a series of rapids of the Liard River stretching over more than 2 kilometres. Several hot and warm springs are located on the rocky banks of the Liard and empty directly into the river. At flood stage some of these springs are covered by water. Most of the reserve is composed of upland and high glacial outwash terraces. A minor portion near the mouth of the Coal River has low gravel shores, a narrow band of low-bench, and some high-bench alluvial floodplain.

**Biological:** The higher-volume hot springs form small circular pools surrounded by a ring of herbaceous and graminoid vegetation, while the lower volume springs tend to be simple seeps on sloping ground. Both kinds show multi-hued and finely patterned skirts of lime deposits on their downhill sides. Most of the hot springs vegetation in this area is composed of common plants, mainly rushes, sedges, grasses, *Asteraceae* and mosses. The exception is the swollen beaked sedge which is rare in British Columbia.

The following four forest communities have been documented in the reserve:

- 1) White spruce – lodgepole pine – fuzzy-spiked wildrye. The community occupies upland sites and has occasional inclusions of aspen and a variety of shrubs.
- 2) Black spruce – Labrador tea – step & feathermosses. This community occurs on poor sites of glacial outwash materials.
- 3) Lodgepole pine – black spruce – step moss, a community intermediate in species combination and site quality between 1 and 2.
- 4) White spruce – mountain alder – red-osier dogwood – mixed herb – step moss. This is a tall, vigorous forest on the small portion of high-bench alluvial floodplain that occurs near the western extreme of the reserve.

**Cultural:** The reserve lies in the traditional territory of the First Nations of Treaty 8 and the Kaska Dena.

Historic fur trade cabins remain within the reserve.

On the slope above the hot springs is a portage trail which was actively used during the Hudson's Bay Company explorations of the area from 1830-1860.

#### MANAGEMENT CONCERNS

SIGNIFICANT SPECIES	BC LIST STATUS	COSEWIC STATUS	CF PRIORITY
Wood Bison	Red listed	Threatened (2000)	1
slender wedgrass	Blue listed		4
swollen beaked sedge	Blue listed		3
Fisher	Blue listed		2
Grizzly Bear	Blue listed	Special Concern (2002)	2

#### THREATS

**Climate Change:** Changes in the hydrology in this area may effect the mineral springs and the associated flora and fauna.

**Access:** Increase in visitors to springs could have significant negative impact on ecosystem.

**RESEARCH OPPORTUNITIES** Reserve protects a good site for study into hot spring formation and the occurrence of beaked sedge.

#### SCIENTIFIC NAMES OF SPECIES MENTIONED IN THE PORTAGE BRULE RAPIDS ER ACCOUNT

##### Flora

alder, mountain (*Alnus incana* ssp. *tenuifolia*)  
aspen, trembling (*Populus tremuloides*)  
dogwood, red-osier (*Cornus stolonifera*)  
feathermoss, red-stemmed (*Pleurozium schreberi*)  
Labrador tea (*Ledum groenlandicum*)  
moss, step (*Hylocomium splendens*)  
pine, lodgepole (*Pinus contorta* var. *latifolia*)  
sedge, swollen beaked (*Carex rostrata*)  
spruce, black (*Picea mariana*)  
spruce, white (*Picea glauca*)  
wedgrass, slender (*Sphenopholis intermedia*)  
wildrye, fuzzy-spiked (*Leymus innovatus*)

##### Fauna

Bear, Grizzly (*Ursus arctos*)  
Bison, Wood (*Bos bison athabascaae*)  
Fisher (*Martes pennanti*)