

## BROWNE LAKE

ER #51

**ORIGINAL PURPOSE** To preserve a wet meadow ecosystem and surrounding forest in the Interior Cedar Hemlock zone.

### OVERVIEW

<b>Date established:</b>	10 August 1973	<b>Location:</b>	20 km ESE of Kelowna City Center
<b>ORC #:</b>	3051	<b>Latitude:</b>	49°49'N
<b>Map number:</b>	82 E/14	<b>Longitude:</b>	119°12'W

<b>Total Area:</b>	114 ha	<b>Elevation:</b>	1,265-1,400 m
<b>Land:</b>	114 ha		

**Access:** The McCulloch Road from Kelowna gives access to the southwest corner of the reserve

<b>Biogeoclimatic Zones:</b>	Interior Cedar Hemlock (ICH)
<b>Biogeoclimatic Variant:</b>	ICHmk1 Kootenay Moist Cool
<b>Ecosection:</b>	Northern Okanagan Highland
<b>Region:</b>	Okanagan
<b>Management Area:</b>	Central Okanagan

### COMPOSITION

**Physical:** The reserve lies on a hilly area of the Interior Plateau, east of Okanagan Lake, perched above the south lip of Mission Creek Valley. It contains a prominent hill in its eastern half and a wet meadow, which drains into Hydraulic Creek, in its rolling to flat western half. Slope exposure is largely to the west.

**Biological:** Except for a wet meadow of four to five hectares in size, the entire reserve is forested, mostly with dense stands of lodgepole pine originating after a fire 80 to 100 years ago. A few veteran Douglas-firs and western larch are scattered through the area, and Douglas-fir regeneration is co-dominant with lodgepole pine in the eastern part of the reserve. A stand of spruce, subalpine fir and larch is adjacent to the southeast corner of the meadow.

The meadow vegetation is dominated by water sedge, but the wettest locations contain slender sedge as well, and the bog rein-orchid is common. A peripheral zone is characterized by bluejoint and other grasses. Some weedy species occur as a result of former cattle grazing and hay cutting.

The reserve contains a diversity of wildflowers among which lilies (trillium, glacier lily, chocolate lily, tiger lily, queen's cup, fairybells, Solomon's-seal, clasping twisted stalk) and orchids (mountain lady's-slipper, fairy-slipper, coralroot, rattlesnake-plantain, rein-orchid) are well represented. The mountain lady's slipper is considered rare in British Columbia. Interesting spring flowers, including alpine *Lewisia* and shooting star, occur on shallow soils and in mossy sites associated with rock outcrops and seepage near the upper boundary of the reserve.

Deer, Moose, Beaver, Red Squirrels, Flying Squirrels, Porcupines and Coyotes

have been noted. Ducks occur on a beaver pond at the southwest corner of the meadow, especially during the nesting season.

**Cultural:** The subalpine meadow was used by First Nations for hunting.

#### MANAGEMENT CONCERNS

##### SIGNIFICANT SPECIES

None listed

##### THREATS

- Climate Change:** Increased levels of disturbance such as beetle infestations and wildfires have been projected to occur as the climate changes. In this reserve, the infestation of mountain pine beetles may continue, resulting in a change in forest habitat. The wet meadow that is surrounded by the forest may be subject to moisture depletion as the temperatures warm and hydrology is altered.
- Forest health:** Increased logging adjacent to the reserve (due to threat of mountain pine beetle kill) creates roads and increases access to the reserve.
- Recreation:** Campers in the recreation area adjacent to the reserve pose a threat of fire and pollution.

##### RESEARCH OPPORTUNITIES

Unlogged forest inside the reserve provides an interesting control area where the natural progression of the mountain pine beetle infestation may be observed.

#### SCIENTIFIC NAMES OF SPECIES MENTIONED IN THE BROWNE LAKE ER ACCOUNT

##### Flora

bluejoint, reedgrass (*Calamagrostis canadensis*)  
 coralroot (*Corallorhiza* sp.)  
 Douglas-fir (*Pseudotsuga menziesii*)  
 fairybells (*Prosartes* sp.)  
 fir, subalpine (*Abies lasiocarpa* var. *lasiocarpa*)  
 lady's-slipper, mountain (*Cypripedium montanum*)  
 larch, western (*Larix occidentalis*)  
 lewisia, alpine (*Lewisia pygmaea* var. *pygmaea*)  
 lily, chocolate (*Fritillaria affinis*)  
 lily, glacier (*Erythronium grandiflorum*)  
 lily, tiger (*Lilium columbianum*)  
 orchid, fairy slipper (*Calypso bulbosa*)  
 pine, lodgepole (*Pinus contorta* var. *latifolia*)  
 queen's cup (*Clintonia uniflora*)  
 rattlesnake-plantain (*Goodyera oblongifolia*)  
 sedge, slender (*Carex lasiocarpa* ssp. *americana*)  
 sedge, water (*Carex aquatilis*)  
 shootingstar, pretty (*Dodecatheon pulchellum*)  
 Solomon's seal (*Maianthemum* sp.)  
 trillium, western (*Trillium ovatum* var. *ovatum*)

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twistedstalk, clasping (*Streptopus amplexifolius*)

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**Fauna**

Beaver, American (*Castor canadensis*)

Coyote (*Canis latrans*)

Deer (*Odocoileus* sp.)

Moose (*Alces americanus*)

Porcupine, North American (*Erethizon dorsatum*)

Squirrel, Northern Flying (*Glaucomys sabrinus*)

Squirrel, Red (*Tamiasciurus hudsonicus*)