

**CALLAGHAN LAKE  
PROVINCIAL PARK**

**B**ACKGROUND  
**R**EPORT

Prepared for:

**Ministry of Environment, Lands and Parks  
BC Parks  
Garibaldi/Sunshine Coast District**

Prepared by:

TERRA FIRMA ENVIRONMENTAL CONSULTANTS

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# INTRODUCTION

This report serves to provide natural, cultural and recreation information to assist the management planning process for Callaghan Lake Provincial Park.

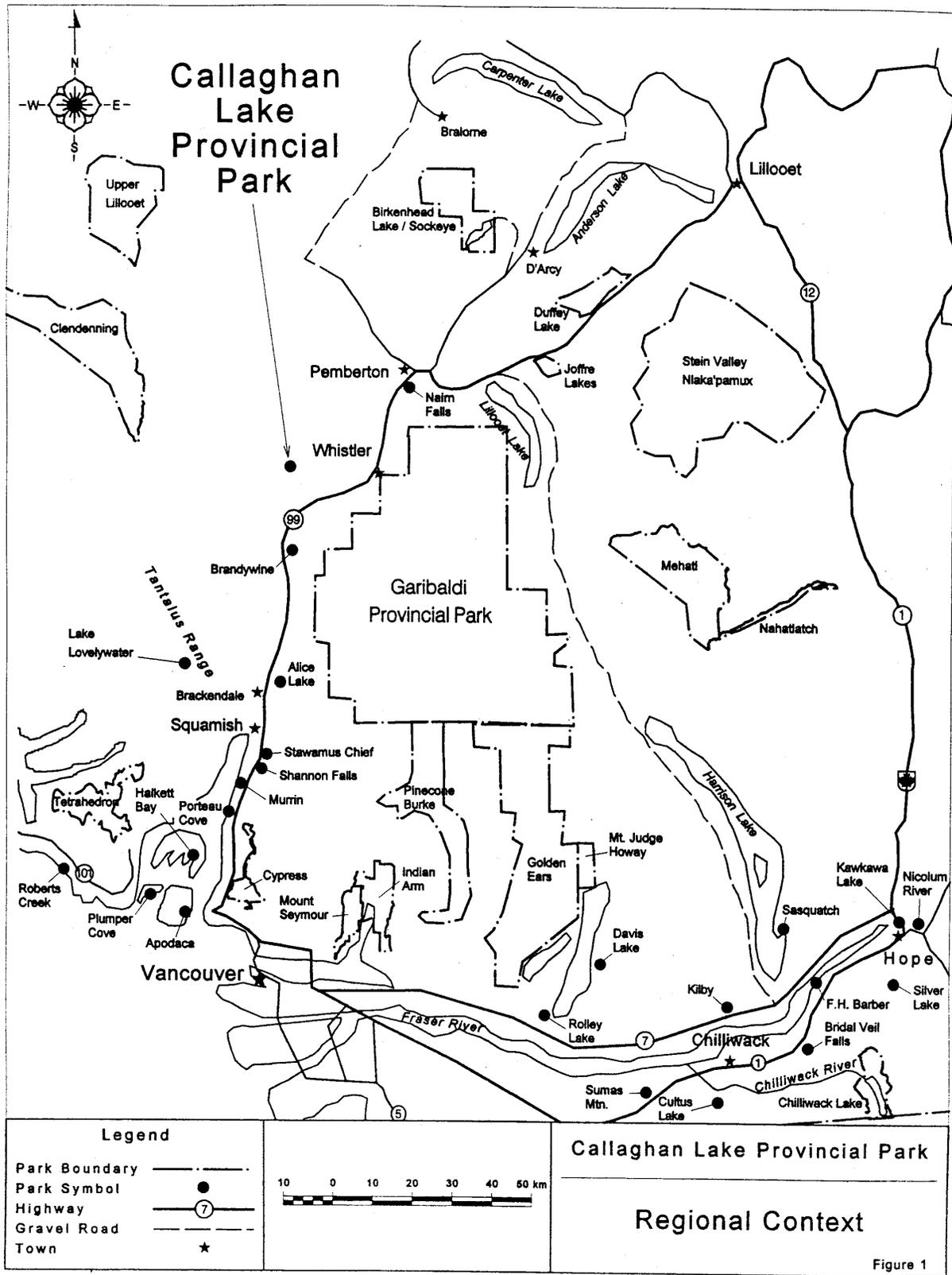
Callaghan Lake Provincial Park is 2,667 hectares in size, and located 75 km. north of Vancouver, and about 12 km. north-west of Whistler (Fig. 1). The park is accessed along the Callaghan Forest Service Road (FSR) to the south end of the lake, 17 kilometres from the Highway 99 turn off approximately 8 kilometres south of Whistler. Other provincial parks in the area include Brandywine Falls Provincial Park (approximately 10 km. south of Whistler municipality on Highway 99), Garibaldi Provincial Park (approximately 20 km. east of Callaghan Lake), and the new protected areas of the Tantalus Range (approximately 35 km. south of the park) and Clendenning (approximately 25 km. west of the park).

## Park Establishment and Legislation

The history of park establishment has not been without contention. With specific conservation interests, BC Parks developed a Callaghan Lake park proposal in the early 1980s. This area was for a 10,000 hectare park, much larger than the present park. Draft plans were submitted by the Assistant Deputy Minister for designation as a Recreation Area for review by Cabinet in November of 1982. Cabinet approval was subsequently granted for a Class "A" Provincial Park. A draft news release was prepared for announcement in August 1983, awaiting signature of the Order-In-Council by the Lieutenant Governor. However, this did not occur. In 1992, a larger Callaghan Lake Study Area of 11,376 hectares was announced as a candidate for protection under the Protected Area Strategy (PAS). A study team was formed in 1993, which developed and examined four protection options for all of the study area, and a reduced area option. The team recommendation went to the Lower Mainland Inter-Agency Management Committee (IAMC) in late 1995. This recommendation was passed from IAMC to the Lower Mainland Protected Areas Strategy Regional Public Advisory Committee who reduced the area to its present size and included the area in the Lower Mainland PAS Recommendation Report. In 1997, Callaghan Lake Provincial Park was established under the *Park Act* at its present size of 2,667 hectares.

## Planning and Management History

Historically, planning and management of the area was largely undertaken by various government resource agencies, with some exceptions. Fish and wildlife resources were managed by BC Environment within the Lower Mainland Region Management Units 2-6 and 2-11 for hunting,



fishing, trapping and guide-outfitting. Cirque Lake and Callaghan Lake were stocked in 1972 and every year subsequently with Rainbow trout. A *Land Act* and a *Mining Act* reserve were placed on the area in 1968 to stop land disposition and to prevent surface rights staking when mineral claims were made. Alpine ski resort proposals were reviewed by the B.C. government since the 1960s under the Commercial Alpine Ski Policy and ski area proposals were actively solicited in 1980 and 1990. No projects were accepted, however, trails and roadwork into the area were licensed by BC Lands. Two commercial backcountry ski recreation tenures and occupation licences were granted within the park area prior to park establishment, and administered by BC Lands. Geothermal exploration lease applications have also been received by government for areas within the PAS study area. Once the 1993 study area was established, interim management guidelines were followed which largely prevented irreversible management decisions from committing resource use.

In 1987, the Ministry of Forests and the Resort Municipality of Whistler initiated a Local Resource Use Plan (LRUP) for an area that included Callaghan Creek, south of Callaghan Lake. This plan primarily addressed concerns regarding silviculture and visual impacts from timber harvesting. As well, a recreation plan was created in 1989 to address long-term recreation management and the increasing demand for backcountry recreation opportunities for the LRUP area. In 1995, this plan was reviewed and updated.

# NATURAL VALUES

## Physiography

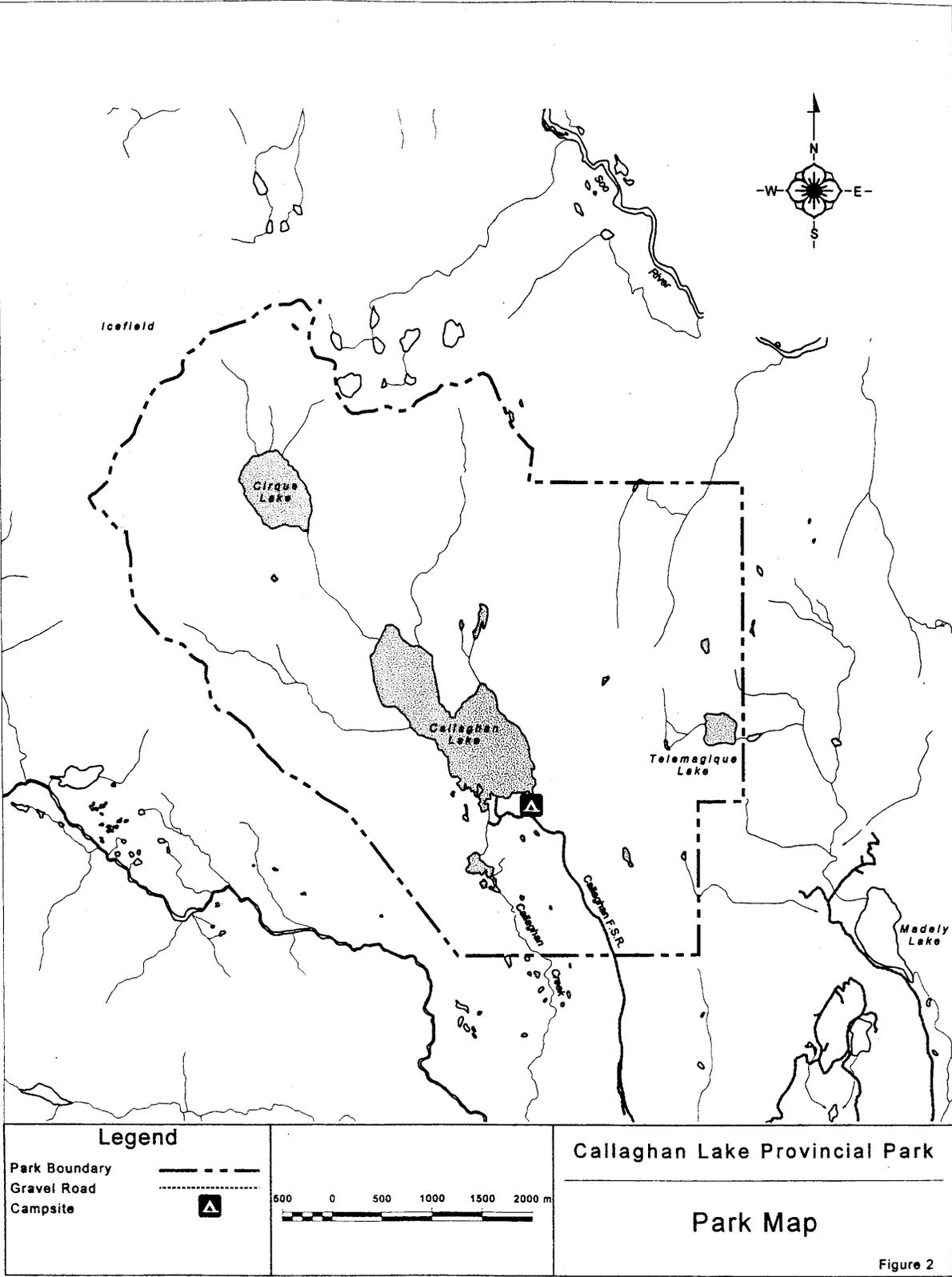
Callaghan Lake Provincial Park lies within the relatively rugged mountainous terrain of the Coast Mountain Range, ranging in elevation from wooded slopes at approximately 1160 metres to alpine peaks at approximately 2270 metres (Fig. 2). The upland valley walls were formed through glacial action and through mass-wasting, in the form of rock and debris flows released by frost heaving, avalanche formation, and seismic activity. The lower slopes are covered with glacial till and slide materials.

The mountains have been strongly glaciated and contain typical features of post-glacial alpine terrain (e.g. talus slopes, flat-lying rocky benches, cirques, hanging valleys, tarns, waterfalls, and upland plateaus with bogs). Callaghan Lake is the single large valley-bottom lake found at 1200 metres, and while several tarns are suspended in cirque basins. Cirque Lake to the north-west of the Callaghan Lake at 1500 metres is the largest of these tarns. Numerous wetlands are found downstream of Callaghan Lake along the outflowing river valley.

## Geology

The park lies within the Southern Coast Mountains, underlain by rocks of the Coast Plutonic Complex. These rocks reflect a complex history of volcanism, magmatic intrusion, uplift, erosion and renewed volcanism. The geology of the Callaghan Creek Valley comprises a north to north-westerly trending "pendant" or remnant block of the Gambier Group volcanic and sedimentary rock (IKG, Gambier Group Volcanic and Sedimentary Strata), that is enveloped on each side by three phases of igneous rock (diorite, quartz diorite and granodiorite). The eastern boundary of the park lies within the zone of igneous intrusions.

The Gambier Group rocks are all deformed, having been affected by at least three deformational events during mountain-building processes: (i) compression in a north-easterly to south-westerly direction caused by movement on a series of north-easterly dipping faults that project in a north-westerly direction up the Callaghan Creek Valley; (ii) off-set and deformation along a vertical fault that projects north-easterly up the Cheakamus River Valley toward Whistler; (iii) dislocation along a broad, vertical, northerly trending fault zone that defines Daisy Lake and projects northward up the Callaghan Creek Valley (Pinsent, pers. comm.).



The three fault systems come together and weaken the rocks in the Callaghan Valley. These faults are linear zones of weakness affecting subsequent: (i) erosion into "Y" shaped valleys in the lower drainages, (ii) placement of relatively recent Garibaldi Group intrusions that form the mountain ridge between the Callaghan and Squamish River drainages, and which, locally erupting, deposited basaltic lava in the Callaghan drainage, (iii) flow of metal-rich fluids responsible for much of the "vein" and "shear-hosted" mineralization found in the area. The floor of the Callaghan Creek Valley is also covered with relatively recent basalt lava which flowed down the drainage toward the Cheakamus River Valley (TQG - Garibaldi Group Volcanic and Sedimentary Strata).

## **Mineral Resources**

Callaghan Lake Provincial Park likely overlies bedrock of good mineral potential for both structurally controlled "vein" mineralization and "volcanogenic massive sulphide". The area lies on-trend with an established "mining camp" of two mining leases and numerous mineral showings. The Northair Mine, which lies approximately 2 km. to the south-east of the park, has produced significant amounts of gold and silver, and appreciable amounts of lead and zinc between 1976 and 1981. After this deposit was discovered in 1970, other showings were found in the lower part of the valley throughout the 1970s and 1980s. All showings are "hydrothermal" metallic deposits. A few may be Britannia-type "massive sulphide" deposits formed from fluids on the sea floor during a break in the "Gambier Group" volcanism. Most, however, are shear or fracture-controlled quartz and/or sulphide "vein" deposits of the "Northair-type", where base (copper, lead, zinc) and precious (gold, silver) metal-bearing fluids were introduced into cracks in the rocks during mountain building processes.

Much of the upper Callaghan Valley including the park area, has been covered by a no-staking reserve since 1968, due to the Commercial Alpine Ski Policy. The close proximity of the Northair mine, and the extensive occurrence of the shear or fracture-controlled "vein" mineral showings throughout the lower valley, suggests there may be mineral values within the upper Callaghan Valley. However, mineral exploration and development are now excluded within Callaghan Lake Provincial Park.

## **Geothermal Energy Potential**

Garibaldi volcanic rocks (TQG), which underlie the Callaghan Creek valley floor, are in geological terms exceedingly young, having erupted between 25,000 and 11,000 years ago. They indicate the presence of subvolcanic magma chambers that can heat percolating ground water to create hot-springs and a potential source of geothermal energy. The area to the south-west of the park around Powder Mountain and Mount Cayley has excellent potential for geothermal springs. There are hot-springs on Shovelnose and Turbid Creeks, south of Mount Cayley, and on Brandywine Creek, east of Mount Fee. The feeder system for the former two springs runs in a north-easterly direction, west of the park boundary. The private sector has expressed interest in exploring and developing this resource. An

application for posting occurs just south-west of the park, however, geothermal energy development is excluded from Callaghan Lake Park.

## **Soils**

Common soils in the valley include Ferro-humic Podzols, Humic Podzols and Typic Folisols. Coarse-textured morainal, colluvial and some fluvial parent materials with moderate permeability and bearing strength are common. Many steep slopes are exposed bedrock or comprised of talus material in the alpine regions.

## **Hydrology**

Callaghan Lake (elev. 1200 m.) is fed by tributaries from Cirque Lake to the north, an unnamed creek to the west and unnamed creeks to the east. Numerous small valleys formed by glaciation radiate outward from the lake. Creeks flow from ice fields atop Mt. Callaghan, and snowfields on the eastern divide. Callaghan Creek flows from Cirque Lake (elev. 1500 m.) to Callaghan Lake 1.5 km. south. It then meanders, feeds another smaller lake, and flows almost 2 km. to the southern boundary of the park. The area has typical hydrological features associated with strongly glaciated, rugged terrain including stacked alpine lakes, clustered pot-hole lakes and short “mares tail” waterfalls. Other tributaries to Callaghan Lake are similar in slope to the upper Callaghan Creek portion with waters plummeting into the main valley.

## **Climate**

The climate of the Callaghan Creek basin is typical of the southern portion of British Columbia with moderating maritime influence maintaining a generally mild climate. The area experiences high annual precipitation, strong winds, mild temperatures, fog and cloud and occasional temperature inversions.

The nearest weather station is found at Alta Lake, 25 km. to the east of the park, at 700 m elevation (nearly 500 m below Callaghan Lake itself). Annual average rainfall, based on 30 years data to 1980, is 836.9 mm with over half of it falling in the September to December period. Average annual snowfall is 608.6 cm with over half falling in December and January. The monthly temperatures averaged for ten years show average maximums over 20°C from July through September, and the minimum average monthly temperatures are below zero for 5 months of the year. Studies on Powder Mountain, to the south-west of the park, show that "the area receives up to 50% more snowfall than corresponding elevations in the Whistler/Blackcomb area" due to the rainshadow effect reducing precipitation east of the Tantalus and Earle Ranges (S-e Canada Inc. 1992).

About half the park lies within the Alpine Tundra and Mountain Hemlock parkland biogeoclimatic zone, 40% is within the Mountain Hemlock zone, and the lower elevation Callaghan Lake and creek makes up the 10% that lies within the Coastal Western Hemlock zone. The Alpine Tundra is typically cold and windy throughout the year. Average temperatures in the warmest month are less than 10°C. Precipitation is high, much of which falls as snow. The higher elevation parkland accumulates snow and has one to five months with mean temperatures below 0°C. Spring and summers may be relatively dry since moisture is released on the lower slopes. The Mountain Hemlock zone has three or less months with average temperatures over 10°C. The Coastal Western Hemlock receives more rain than snow, though the higher elevations of this zone can be covered in snow throughout a good portion of the year. Summers are generally cool with only three to four months averaging above 10°C.

## Vegetation

The park lies within the Eastern Pacific Ranges Ecosection. The Alpine Tundra biogeoclimatic zone covers the north-west and south-east corner of the park area. Related Mountain Hemlock parkland (MHmmp2) combined with alpine tundra covers almost 50% of the park, primarily in the north-west and south-east highlands of the park. Extensive glaciation and rock outcrops are characteristic of this zone (AT p), with minimal vegetation. Vegetation usually consists of shrubs, herbs and lichens, with occasional stunted subalpine fir (*Abies lasiocarpa*), Engelmann spruce (*Picea engelmanni*), mountain hemlock (*Tsuga mertensia*), and whitebark pine (*Pinus albicaulus*).

Mountain Hemlock moist maritime subzone (MHmm2) covers the mid-valley slopes of the park, for a total of 921 ha. or 34% of the area. Mountain hemlock is the dominant species with western hemlock, western redcedar (*Thuja plicata*), yellow cedar (*Chamaecyparis nootkatensis*), Douglas fir (*Pseudotsuga menziesii*) and Amabilis fir (*Abies amabilis*).

Coastal Western Hemlock moist subarctic (CWHms1) subzone covers 407 ha of the park, or 15%. This zone is found below the 1200 m level and covers the Callaghan Lake shore and lower valley. Western hemlock (*Tsuga heterophylla*) is the dominant species, and grows in association with patches of Douglas fir and western redcedar with a sparse herb layer and predominance of several moss species.

## Wildlife

Wildlife species in Callaghan Lake Provincial Park include a present or probable 14 reptiles and amphibians, six of which are common including the long-toed salamander (*Ambystoma macrodactylum*), north-western salamander (*Ambystoma gracile gracile*), western toad (*Bufo boreas*), Pacific tree frog (*Hyla regilla*), north-western garter snake (*Thamnophis ordinoides*) and common garter snake (*Thamnophis sirtalis*) (D. Tyson, pers. comm.). Rare reptiles include the ensatina

salamander (*Desmognathus eschscholtzii*), western red-backed salamander (*Plethodon vehiculum*) and the northern alligator lizard (*Gerrhonotus coeruleus*). Small mammals present or probable include a list of 24 species and a further 9 bat species. Sixteen furbearing species are likely present, with confirmed sightings for bobcat (*Lynx rufus*), cougar (*Felis concolor*), coyote (*Canis latrans*), mink (*Mustela vison*), Douglas' squirrel (*Tamiasciurus douglasii*), weasel (*Mustela frenata*), wolverine (*Gulo gulo*) and wolf (*Canis lupus*). Large mammal species present or probable include black bear (*Ursus americanus*), Columbian black-tailed deer (*Odocoileus hemionus columbianus*), and mountain goat (*Oreamnos americanus*) (a wintering area exists on the north-east ridge above the lake (S. Rochetta, pers. comm.)). Transient species include moose (*Alces alces*) and grizzly bear (*Ursus arctos horribilus*) (D. LeGrandeur, pers. comm.; S. Rochetta, pers. comm.). Species present or probable are listed in Appendix 1.

The park lies within Wildlife Management Units 2-06 and a portion of 2-11. Previous to park establishment, the area supported slight hunting pressure, primarily for black-tailed deer, black bear and upland game birds (ruffed, spruce and blue grouse and ptarmigan). The Callaghan Lake area was closed to mountain goat hunting in 1997 (prior to park establishment).

## **Fish**

Callaghan Lake has natural populations of Dolly Varden char (*Salvelinus malma*) and rainbow trout (*Onchorhynchus mykiss*), and has been stocked since 1975 with rainbow fry and juveniles. The lake has an allowable daily catch of four trout and char combined. Callaghan Creek, downstream of the lake, is known to contain Dolly Varden char and rainbow trout, and has significant fishing pressure. Cirque Lake also contains both species.

## **Rare and Endangered Species**

One rare and endangered species occurrence has been reported by the Conservation Data Centre for the park area. The blue-listed nodding semaphore grass (*Pleuropogon refractus*) has been documented in boggy habitat within the park.

## **CULTURAL VALUES**

The Squamish Nation considers the Callaghan Lake area within their traditional territory. They are presently involved in tripartite treaty negotiations through the British Columbia Treaty Process and have not extinguished their aboriginal rights in any formal agreement with either the provincial or federal government at this time.

The Mount Currie First Nation has also included the Callaghan Lake area within its traditional territory. Currently, the Mount Currie First nation is not involved in the British Columbia Treaty Process.

Cultural features and traditional uses within the study area are not documented by the Archaeology Branch of the provincial Ministry of Small Business, Tourism and Culture. Further analysis including field work may be required.

# RECREATION AND TOURISM VALUES

The Callaghan Lake area receives an average snowpack of 275 centimetres which may yield 150 days of skiing conditions. In addition, the rolling subalpine terrain is well suited to nordic skiing, and the steeper slopes surround the gentle valley floor and meadows offer telemark and ski touring opportunities.

The area has very high recreational and aesthetic values and has a history of use by residents of the Sea-to-Sky Corridor, as well as visitors from the region. The forest road offers access to front-country features (camping and hiking trails) and the backcountry trails and subalpine meadows offer wilderness hiking and viewing. The lake is one of only a few subalpine lakes accessible by car, and within two hours of Vancouver.

A recreation site formally operated by the Ministry of Forests, offers rustic, lakeside camping in a wilderness setting and an area to launch car-top boats.

Although hiking trails have not been developed in the park, access to numerous circuit trails may be gained from the rough marked and unmarked trails (e.g. Ring Lake, Mount Callaghan, Madely Lake and Rainbow Lake to Whistler).

The Callaghan Lake area (along with Rainbow/Madely) is one of only five areas in the Soo TSA which offers multiple features and multiple high recreation values (Geoscape 1996). The criteria for evaluation of areas included: diversity of features, range of difficulty, range of single or multi-day experience, aesthetics, access, unique features and opportunity to experience a wilderness setting.

Commercial recreation capability for the Callaghan basin has been rated High for ski touring, Moderate for snow cat skiing, High for heli-skiing, and High for snowmobiling (SVI. Environments 1996). Commercial recreation capability for summer activities has been rated High for hiking, High for heli-hiking, High for mountain climbing and mountaineering.

## Outdoor Recreation Features

The park lies within a large area which has wilderness qualities, defined as "greater than 5,000 ha retaining its natural character, affected mainly by forces of nature with the imprint of modern man substantially unnoticeable". Except for the logging road, and a rustic campsite, the wilderness attributes are dominant within the park.

The area represents the upper reaches of an alpine glacial trough. About half of the area is alpine or is sparsely vegetated with subalpine vegetation and trees in krumholz form. The park has a variety of

characteristics such as cols, joint-controlled gullies and depressions, rocky bluffs, trimlines and moraines, and numerous talus slopes.

Cirque Lake is an alpine lake at 1,490 metres elevation and is within easy hiking distance. The meadows above the lake are scenic and accessible, the meadow beside the lake has a rare, amphitheatre formation.

Callaghan Lake and Cirque Lake offer subalpine fishing for trout and char. Rapids occur in many stretches of the creek. There are numerous small wetlands and rock-controlled lakes, especially in the southern and eastern areas of the park, and in the upper headwaters of Callaghan Creek. These add visual variety and wildlife diversity.

## Visual Values

The Callaghan Lake Road viewshed includes several glaciers including Metal Dome, Grizzly, Powder South and Powder North. The landscape provides focal, enclosed and panoramic visual experiences. The park access and lake itself draws focus to various peaks, while the setting within a glacial trough encloses the viewer within a wall of mountains. Although no hiking trails are developed, hiking is possible along ridges and peaks which provide panoramic experiences.

## Resource Analysis

This section considers the significance of the natural and cultural resources of the park in relation to the goals of the Provincial Parks System, as described below:

- *to protect British Columbia's special natural, cultural and recreational features;*

Callaghan Lake Park protects an area of high recreational values, high opportunity for public use, high diversity of biological and physical characteristics, and very high level of naturalness.

- *to provide parks that are major outdoor recreation destinations;*

This park would satisfy this objective by providing vehicle-access, subalpine lake-oriented opportunities for backcountry camping and hiking, nordic and back-country skiing, small boating and associated recreational activities.

- *to provide outstanding backcountry recreation opportunities throughout B.C.;*

This park ranks very high in the Lower Mainland for the provision of backcountry skiing and hiking, within a virtually pristine environment within a large wilderness.

- *to provide parks along major travel corridors;*

The park is easily accessed in summer from Highway 99, south of Whistler, following a gravel Forest Service Road (Callaghan FSR 01).

- *to provide parks for regional recreation where other agencies cannot;*

The park area has long served as the one of the prime winter recreation areas for the Sea-to-Sky corridor communities as well as the Lower Mainland residents and visitors, and is a key backcountry recreation area.

## **Existing Facilities**

Mad River Nordic Ski Enterprises Inc. operates a commercial cross-country ski operation which includes 4 km. of groomed trails within the park (of the total 38 km. in its operating area), and a mountain cabin west of the park. The trails cross the forestry road, and west from a route south of the lake.

The Ministry of Forests has maintained a road (built by a previous land tenure lessee) to the lake, and has established an open recreation site with two outhouses, two tables, one garbage bin and six camp fire rings (Figure 3.).



# TENURES, OCCUPANCY RIGHTS AND JURISDICTIONS

An Order-in-Council (O.I.C.) Reserve was established under the Lands Act in 1968 (O.I.C. 2791) to prevent land disposition. An O.I.C. by the Minister of Energy, Mines and Petroleum Resources in 1968 also prevented any surface rights dispositions; however, mineral and placer claims could be staked for an area that included less than half of the Callaghan Lake park boundaries (O.I.C. 3129). This was placed in order to examine the feasibility for an alpine ski resort. A No Staking Reserve was then placed in 1993 by BC Regulation under the Mineral Tenure Act, Sec. 18 and renewed to 1998. A new area including only the Callaghan Lake Park boundaries was included in another No Staking Reserve in 1997, in perpetuity. Numerous claims were staked prior to and since 1968, all of which have expired within the park area.

Forest tenure numbers exist for the forest service road and a recreation site at Callaghan Lake, however, these are not official since this is not part of the Provincial Forest.

Ministry of Environment, Lands and Parks; Fish and Wildlife Branch administer a trapline (TR211T006) which covers an area many times larger than the park. Mad River Nordic Skiing Enterprises has monitored their tenure area, much of which lies within the park, and has not encountered any trapping activity (Brent Harley and Assoc. Inc. 1997).

No guideoutfitter territory has been established in the area of the park or surrounding it, although BC Environment may choose to allocate an area outside the park in the future.

BC Environment also administers six angling licences on Callaghan Lake, four of which are for less than 30 days and two for 150 days. Licensees are targeting rainbow trout (P. Anderson, pers. comm.). These licences are subject to annual renewal and all licensees have been notified that operating within the park boundaries is not permitted without a valid Park Use Permit.

BC Lands, Ministry of Environment, Lands and Parks has granted licensed tenure to Mad River Nordic Ski Enterprises Inc. on a one-year basis since 1985, and on a five year basis starting in 1992 (R2402463), with current expiry of 01/31/99. Their licence permits the operation of a commercial cross country and ski touring operation. A temporary Park Use Permit is issued for 1998 to approve the historic uses within this tenure, that also occur within the park. These activities will allow snow cat grooming of trails to Conflict Lake (due west of Callaghan Lake) and ski touring. No trail development or expansion within the park is permitted under this licence.

A joint licence had been granted to two heli-skiing operations for tenure on Powder and Callaghan Mountain which extended into the western ridge of the park (Whistler-Tyax Heli-skiing) (R2402402) which expired in May of 1997. Re-application for the same area was approved, however, excluding this area of the park from the tenure. If the offer made by BC Lands for renewal is not accepted by the

applicant, the lease may roll over to the 20 year period previously approved under the previous contract arrangement. Adjacent to the park boundaries lie two other recreation reserves which are closely connected by trails and used by the Whistler population: Madely Lake Recreation Reserve and Rainbow Alpine Map Reserve, which lie off the south-east boundary of the park.

**Table 1. Callaghan Lake Area Tenures - Past and Present**

**Mineral Tenures**

OIC 3129	No Surface Rights	In 1968; Reserve under the Mineral Act and Place-mining Act prohibiting surface right disposition over half of the current park boundaries. Existing mineral or placer claims or leases, upon expiry, were subject to the reserve. New claims could be staked, however, no surface rights were given. Established in 1968 and current.
B.C. Reg 91/93	No Staking Reserve	File #14280, EMPR, under the Mineral Tenure Act, Sec.18; established a no staking reserve for the current park in 1993. Renewed in 1995 (BC Reg 119/95); and in 1996 (BC Reg 81/96) to 1998.
B.C. Reg 302/96	No Staking Reserve	For all Lower Mainland parks but Callaghan; established in November 1996.
B.C.Reg 324/97	No Staking Reserve	Amends 302 to include Callaghan boundaries, and rescinds Reg 91/93.

**Land Act Tenures**

O.I.C 2791/68	Land Reserve	Under Land Act, Sec.88(1) all unalienated and unencumbered Crown lands were reserved from alienation (File#0271763); cancelled in late 1980's.
R2405865	Sec 12 Map Reserve	Reserve #932010 - Callaghan Valley by B.C. Lands for purposes of miscellaneous land uses (planning, marketing, development) established in 1993 with no expiry (PIN 015565290).
R0303792	Sec 12 Map Reserve	Reserve #71082 - north of Cirque Lake; some inclusion of park area. Held by B.C.Lands for purposes of miscellaneous land uses, planning, marketing, development; established in 1971 with no expiry (PIN 012352030).
R0356442	Notation of Interest	Reserve #80200 - Callaghan Lake, held by B.C. Parks for the purposes of UREP/Rec Reserve; established in 1980 with no expiry. (PIN 011490460)
R2402463	Licence of Occupation	Area includes all of park but Cirque Lake and northern height of land. Held by Mad River Nordic Centre. Established in 1985 with expiry of 01/31/99. (PIN 011884700).
R2492402	Licence of Occupation	Whistler-Tyax joint tenure for heli-skiing operation. Area includes only the part of the park which lies west of Callaghan Lake to the height of land. Expiry in May 1997. New application awaiting approval which excludes this park area.
R/W 0274022	Road Right of Way	Access road to Powder Mtn., issued in 1966 to Birkhill Estates Ltd. (indicated on Land Reference maps, but appears not to have been built).

FOREST SERVICE

FSR 6102.01	Road Permit	Callaghan Forest Service Road (not official)
0109	Rec Reserve	Callaghan Lake Rec Site (Not official, no reserve established).

**WILDLIFE ACT**

TR211T006	Trapline Territory	Whistler area
	Angling Guides	Six licensed for Callaghan Lake and creek for 10 to 150 days

# MARKETING ANALYSIS

## Existing Use Analysis

The Forest Recreation Site at Callaghan Lake receives very high use with growth in visitation figures tripling between 1992 and 1995. Declines in 1996 were likely weather-related. The same trend is seen at Alexander Falls, a few kilometres south of the park, while visitation at Cal-Cheak (MoF recreation site at the highway junction with the Cheakamus) has grown dramatically (J. Crooks, pers. comm.).

**Table 2**  
**MOF Recreation Site Campsite Attendance (1992 - 1996)**

<b>Recreation Site</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>
Cal-Cheak	6751	7561	8468	4871	11529
Alexander Falls	360	403	451	1129	319
Callaghan Lake	1500	2550	2610	5108	1022

Aside from camping, other recreational uses of the park historically have included nordic skiing, ski touring and ski mountaineering. Heli-skiing occurs near the western slopes of the park, and Metal Dome, Brandywine and Powder Mountains to the west. Snowmobiling into and through Callaghan valley en route to higher elevations, particularly the Pemberton Icefield, is common.

Mad River Nordic Ski Enterprise has operated in their commercial backcountry recreation operating area, including Callaghan park, since 1982. To measure the interest in cross-country or Nordic skiing in the area, Mad River opened the 1986/1987 season as a demonstration effort to illustrate the potential of the area. They received 525 guests in one weekend, 925 user days for the season. In other years the figures range from 61 to 133 user days.

## Trends and Demand

In addition to the growth in recreational use in the park, and at nearby Forest Recreation Site (Table 2, previous page) are the campground and day-use attendance figures for Brandywine Provincial Park, a few kilometres south of the Callaghan Forestry Road. Use dramatically increases to 1995, while slight decreases in 1996 and 1997 may be due to two very wet seasons (Table 3).

**Table 3**  
**Brandywine Provincial Park Campground and Day-Use Attendance**

<b>Visitation</b>	<b>1988</b>	<b>1989</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>
Campground	889	1035	933	1068	1511	1678	1815	2049	1966	1815
Day-Use	25985	27218	31730	31618	43361	45635	63850	52584	46924	44775

The growth in recreation site visitation is expected to continue, given the growing popularity of the region for outdoor recreation, and the growth and proximity of the Whistler, as the recreationalists' mecca.

As a measure of demand for winter recreation opportunities, two commercial recreation interests have had tenures within the park area, one of which has been renewed. Other applications have been received under the Commercial Backcountry Recreation Policy. In addition numerous proposals for alpine ski resorts have been received by the provincial government for the larger Callaghan watershed area in the 1980s and 1990s under the Commercial Alpine Ski Policy.

Mad River Nordic Ski Enterprises projects Nordic Day Skiers to number nearly 6,000 in 1998, with increases in 1999 at 16,000 skiers, 20,000 in the year 2000, increasing to 23,000 in 2002. Guided snowmobile tour visitation is expected to be 2,300 in 1998, with a doubling to 5,100 in 1999, and slower, but steady growth thereafter. Although these numbers of visitors will be active over the entire operating area which is at least three times larger than the park, most of these visitors will be coming through the park since Mad River proposes to gain winter vehicular access via a ploughed forestry road to Alexander Falls, agreement pending from Ministry of Forests. Thereafter they propose to use a route through the park as a snowmobile and a nordic skiing trail.

## **Promotion and Information**

Visitor information is not currently available for the park, due to its new creation. Research on Visitor Use Surveys is being performed at the University of British Columbia, Geography department.

## **Park Products**

The primary products are easily accessible backcountry hiking, skiing, snowmobiling and camping, and day use recreation. Callaghan Lake is the key feature within the protected area, which is the largest road-accessible subalpine lake in the Coast Range. The park offers excellent subalpine and alpine upland for summer and winter recreation opportunities.

The park offers many unique visual features including very deep alpine cirques and lakes, rare stacked alpine and clustered pot-hole lakes, a single, large valley-bottom lake and short "mares tail" waterfalls emanating from hanging valleys and upland plateaus with hanging "swamps" resulting from inefficient drainage.

Fishing for rainbow trout is popular in Callaghan Lake and wildlife viewing is possible throughout the park. Nature viewing and appreciation are also popular day-use activities.

The snowpack in the Callaghan area is determined as double that of similar elevations in Whistler, and provides ideal backcountry skiing conditions.

# **KEY MANAGEMENT ISSUES**

## **Boundaries**

The Callaghan Lake Provincial Park falls far short of the earlier proposals, and only half of the "reduced area" option under the PAS process was protected. As a result, numerous features which contributed towards protection and management under the study area, remain open to numerous resource and recreation interests. Management of recreation and visual features outside the park should occur through close co-operation with other agencies and through their planning and legislation.

## **Commercial Activities**

BC Parks is in receipt of two draft Management Plans for Commercial Backcountry Recreation operators applying to amend tenures, activities and/or new application for commercial activities within the park area.

Guided angling activity is licensed for 1998 on Callaghan Lake and Creek, and a trapline territory covers the park.

The capacity of the park to withstand volumes of commercial use is undetermined at present and the master plan has not been prepared within which to determine fully other compatible uses.

## **Conservation**

Very little study has been performed on the specific flora and fauna, sensitive environments and unique features. High to very high recreational use of certain areas of the park prior to park establishment may have entrenched patterns difficult to change, with potential impacts on these features.

## **Recreation Opportunities**

Potential for conflict exists between motorized (snowmobile, snowcat, helicopters, ATV use) and non-motorized recreational activities (skiing, snowshoeing, nature appreciation, etc.) with the existing commercial tenures and the park. High to very high winter use by snowmobilers occurred throughout the park area prior to establishment, with up to 500 vehicles travelling through the park on the busiest weekends. BC Parks needs to discuss this issue with this key user group and provide information regarding ethics and regulations that come with the park designation.

The Callaghan Lake recreation site is not developed to handle the often large groups of recreationalists that frequent the site, due to inadequate facilities (one outhouse, two tables, one garbage bin). Camping and other facilities need to be planned (eg. hiking trails, viewpoints, ski trails).

Hunting has occurred within the park area prior to park establishment and is still designated as open for the present. The acceptability of this activity and its continuation will have to be determined jointly with BC Environment and the current status advertised through official hunting regulations and BC Parks promotional materials.

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# **CALLAGHAN LAKE PROVINCIAL PARK**

## **BACKGROUND REPORT**

### Appendix 1

Wildlife Species Within Callaghan Lake Provincial Park:  
Probable and Confirmed

## Reptiles and Amphibians in Callaghan Lake Provincial Park: Probable and Confirmed

Species	Scientific Name	Status <sup>1,2</sup>
Long-toed Salamander	<i>Ambystoma macrodactylum</i>	C
North-western Salamander	<i>Ambystoma gracile gracile</i>	C
Western Toad	<i>Bufo boreas</i>	C
Pacific Tree Frog	<i>Hyla regilla</i>	C
Tailed Frog	<i>Ascaphus truei</i>	U
Red-legged Frog	<i>Rana aurora</i>	U
Spotted Frog	<i>Rana pretiosa</i>	P
Ensatina Salamander	<i>Ensatina eschscholtzii</i>	Y
Western Red-backed Salamander	<i>Plethodon vehiculum</i>	R
Northern Alligator Lizard	<i>Gerrhonotus coeruleus</i>	R
Rubber Boa	<i>Charina bottae</i>	P
North-western Garter Snake	<i>Thamnophis ordinoides</i>	C
Common Garter Snake	<i>Thamnophis sirtalis</i>	C
Western Garter Snake	<i>Thamnophis elegans</i>	C
Painted Turtle	<i>Chrysemys picta</i>	Y
Rough-skinned Newt	<i>Taricha granulosa</i>	P

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**P = Probable; R = Rare; Y = Presence indicated, status uncertain;  
C = Common; U = Uncommon; T = Transient**

<sup>1</sup> Danny Tyson, BC Environment, Wildlife Section, Surrey

<sup>2</sup> Steve Rochetta, Habitat Protection, BC Environment, Squamish

## Mammals of Callaghan Lake Provincial Park: Probable and Confirmed

<b>Common Name</b>	<b>Scientific Name</b>	<b>Status<sup>1,2</sup></b>
Shrew-mole	<i>Neurotrichus gibbsi</i>	P
Common shrew	<i>Sorex cinereus</i>	P
Dusky shrew	<i>Sorex monticolus</i>	C
Water shrew	<i>Sorex palustris</i>	C
Vagrant shrew	<i>Sorex vagrans</i>	Y
Big brown bat	<i>Eptesicus fuscus</i>	Y
Silver-haired bat	<i>Lasionycteris noctivagans</i>	Y
Western long-eared myotis	<i>Myotis evotis</i>	Y
Little brown myotis	<i>Myotis lucifugus</i>	Y
Yuma myotis	<i>Myotis yumanensis</i>	Y
Townsend's big-eared bat	<i>Plecotus townsendii</i>	P
Long-legged myotis	<i>Myotis volans</i>	Y
California myotis	<i>Myotis californicus</i>	Y
Hoary bat	<i>Lasiurus cinereus</i>	Y
Raccoon	<i>Procyon lotor</i>	Y
Spotted skunk	<i>Spilogale putorius</i>	P
Striped skunk	<i>Mephitis mephitis</i>	Y
Porcupine	<i>Erethizon dorsatum</i>	C
Snowshoe hare	<i>Lepus americanus</i>	C
Common pika	<i>Othotona princeps</i>	C
Southern red-backed vole	<i>Clethrionomys gapperi</i>	Y
Meadow vole	<i>Microtus pennsylvanicus</i>	Y
Water vole	<i>Microtus richardsoni</i>	Y
Heather vole	<i>Phenacomys intermedius</i>	P
Long-tailed vole	<i>Microtus longicaudus</i>	P
Bushytail woodrat	<i>Neotoma cinerea</i>	U
Deer mouse	<i>Peromyscus maniculatus</i>	C
Columbian mouse	<i>Peromyscus oreas</i>	P
Pacific jumping mouse	<i>Zapus trinotatus</i>	Y
Hoary marmot	<i>Marmota caligota</i>	Y
Northern flying squirrel	<i>Glaucomys sabrinus</i>	Y
Yellow pine chipmunk	<i>Tamias amoenus</i>	Y
Townsend chipmunk	<i>Tamias townsendi</i>	Y
Douglas' Squirrel	<i>Tamiasciurus douglasii</i>	C
Beaver	<i>Castor canadensis</i>	P
Bobcat	<i>Lynx rufus</i>	Y
Lynx	<i>Lynx canadensis</i>	P
Cougar	<i>Felis concolor</i>	Y

Coyote	<i>Canis latrans</i>	Y
Fisher	<i>Martes pennanti</i>	P
Marten	<i>Martes americana</i>	P
Mink	<i>Mustela vison</i>	Y
Muskrat	<i>Ondatra zibethicus</i>	P
River otter	<i>Lontra canadensis</i>	P
Weasel	<i>Mustela frenata</i>	Y
Wolverine	<i>Gulo gulo</i>	Y
Black Bear	<i>Ursus americanus</i>	Y
Grizzly Bear	<i>Ursus arctos horribilus</i>	T
Moose	<i>Alces alces</i>	T
Mountain Goat	<i>Oreamnos americanus</i>	Y
Black-tailed deer	<i>Odocoileus hemionus columbianus</i>	Y
Wolf	<i>Canus lupus</i>	T

**P = Probable; R = Rare; Y = Presence indicated, status uncertain;**

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