# 7.11 Land Use and Tenure

This section examines the potential effects of routine project activities and operations on non-traditional land and resource use in the vicinity of the project. Non-traditional land uses include activities that take place under formal tenures and licenses, and informal activities, such as recreational use. Traditional land uses, defined by First Nations with an interest in the project area, are discussed in Section 7.12: First Nations and Traditional Use. Potential effects of accidents and malfunctions are discussed in Section 8.

# 7.11.1 Scope of Assessment

## Issues and Selection of Valued Ecosystem and Cultural Components

Potential adverse effects of the project on land use and land tenure can include alienating or inhibiting access for other land use (e.g., presence of project facilities conflicts with other resource extraction activities or non-consumptive use of the area), or changing the amount or quality of the resource or land use activity (e.g., increased access or presence of industrial facilities reduces quality of area for wilderness recreation and guide outfitting, effluent discharges may affect water quality for consumption or fishing). The project may also have positive effects by increasing access for other uses.

A preliminary list of valued ecosystem and cultural components (VECCs) has been defined for the project environmental assessment based on the EA Report Guidelines (Yukon ECO 2005) and a review of previous work (Gartner Lee Limited 2004). Due to the remote location of the project, there are relatively low levels of use, although there are numerous mineral claims in the area. No specific issues have been raised during regulatory, public and First Nations consultation concerning potential conflicts of the project with existing and planned land use. The selected VECCs provide the basis for a systematic inventory of existing land tenures and existing and planned land uses activities in the area, and an assessment of potential project effects during project construction, operation, decommissioning and closure phases. The time frame for other land use activities in the area has been inferred from the status of tenures and consultation with land management and tenure granting agencies.

# **Temporal Boundaries**

The timeframe for the assessment encompasses baseline conditions, as characterized from available information in the fall of 2005, and all project phases from construction through closure. Incremental effects in relation to baseline conditions will be greatest during construction and persist through operation and early stages of decommissioning (approximately 15 years). Progressive reclamation and phased decommissioning of facilities will result in a gradual reduction of effects until final reclamation and closure, when effects will be limited to those associated with the access road and airstrip which will be left in place. In order to characterize the range of project and cumulative effects on land use and land tenure, effects characterization will focus on the baseline, full build out and operation of facilities and closure phases.

		···	<b></b>
Proposed VECC	Rationale for Selection	Linkage to EA ReportGuidelines or Other Regulatory Drivers	Baseline Data for EA
Settlement and transportation infrastructure	Project development could affect exising cabins, trails, roads, powerlines or other infrastructure	Information requested in the EA Report Guidelines	<ul> <li>Territorial mapping</li> <li>2005 tenure information</li> <li>Government and industry maps and data</li> </ul>
Mineral and oil and gas activity	Potential for project effects due to presence of numerous other tenures in the immediate vicinity of the project	Information requested in the EA Report Guidelines	<ul> <li>2005 tenure information</li> <li>Government and industry maps and data</li> <li>Consultation with YEMNR</li> </ul>
Forestry and agriculture	Clearing for site development could affect productive land base	• Information requested in the EA Report Guidelines	<ul> <li>2005 tenure information</li> <li>Government and industry maps and data</li> </ul>
Non-traditional fishing	Ground disturbance and erosion during construction and potentially contaminated site drainage or effluent discharges could effect fish and associated fishing activity	Information requested in the EA Report Guidelines	<ul> <li>Government and industry maps and data</li> <li>Consultation with Aquatics discipline</li> </ul>
Non-traditional hunting	Project access road could affect nature and level of hunting activity in the area	Information requested in the EA Report Guidelines	<ul> <li>Government and industry maps and data</li> <li>Consultation with Wildlife discipline</li> </ul>
Trapping	<ul> <li>Project access could affect level of trapping activity</li> <li>Project – related disturbances could affect fur-bearer habitat and abundance</li> </ul>	Information requested in the EA Report Guidelines	<ul> <li>2005 tenure information</li> <li>Government maps and data</li> <li>Consultation with Wildlife discipline</li> </ul>
Tourism and non-consumptive recreation	Project access could affect level of recreation activity	• Information requested in the EA Report Guidelines	Government and industry     maps and data
Guide-outfitting	Project site and access development could affect guide-outfitting areas	Information requested in the EA Report Guidelines	<ul> <li>2005 tenure information</li> <li>Government and industry maps and data</li> </ul>
Protected and environmentally significant areas (ESAs)	Project site and access development could conflict with conservation areas or objectives	Information requested in the EA Report Guidelines	<ul> <li>2005 tenure information</li> <li>Government maps and data</li> </ul>

# Table 7.11-1Land Use and Land Tenure VECCs, Selection Rationale and Data<br/>Sources

## Study Area

Project effects on identified VECCs include potential direct effects of the project disturbance footprint on existing tenures and the resource or land use they host, and potential indirect effects on wildlife and fisheries resources which support hunting, trapping, fishing and guide outfitting. Accordingly, the LSA for the land use assessment includes the project disturbance footprint, conservatively defined as the total area of all claim areas affected by project facilities and construction (Figure 7.11-1). The RSA for land use is the same as the RSA for wildlife (Section 7.10.1) (Figure 7.11-1), which is the area within which the project may affect hunting, trapping and guide outfitting, or contribute to a reduction in the productive capacity of wildlife populations to support these activities. The land use RSA also encompasses the RSA for potential effects on fisheries (Section 7.8.1) and associated capacity of the area to support fishing.

# Figure 7.11-1 Land Use and Tenure Local and Regional Study Areas (Vol. 2)

# 7.11.2 Baseline Conditions

# 7.11.2.1 Methodology

The objectives of baseline data collection for the land use and tenures assessment are to identify existing land uses and resource users in the region and establish land use and tenure trends and, where possible, indicate possible future uses.

Baseline land use and tenure data was collected for the LSA and RSA through a combination of reviewing and incorporating the findings of past studies in the project area and the surrounding region and collecting additional baseline information as necessary to update existing information and address data gaps.

Information sources include:

- government data bases, digital data and maps
- hunting, trapping and outfitting areas
- websites for government and non-government agencies and organizations
- personal communications with key government agency representatives regarding known resource requirements of other disclosed projects

## 7.11.2.2 Results

Baseline conditions for selected VECCS are described in the following sections.

## Land Use Planning and Zoning

The Finlayson District is not currently part of any formal land use planning process. Lands within the Yukon are controlled by various levels of government (Yukon Lands 2005):

• vacant lands within the territory are governed by the Yukon government

- First Nations control their settlement area
- municipalities administer lands, community plans and zoning bylaws within their jurisdictions
- the Federal government controls lands consisting of the three national parks and one Wildlife Area

The project area is located within vacant lands falling under the rule of the Yukon government. Planning regions have been established by the Yukon Land Use Planning Council. The Kaska Planning Region, in which the project area is located, is currently an inactive region so there are no current land use plans developed for the project area (Yukon Land Use Planning Council 2005). Several First Nations Interim Protected Lands ("R-Blocks") are located within the vicinity of the project and access corridor (see Figure 7.11.7). These lands are held for future First Nations settlement claims and are not available for resource development. As no development will occur in these areas, they will not be directly affected by the development of the project.

## Land Use Dispositions and Applications

According to the Yukon Mining Claims viewer, there is only one land disposition and two land applications within the RSA. The disposition is for a large area surrounding both arms of Frances Lake. There are also two small rural residential land applications located along the Robert Campbell Highway, adjacent to Frances Lake. One land application, is scheduled to be reviewed at the October Land Application Review Committee (LARC) meeting (Yukon Lands 2005b).

#### Settlement and Transportation Infrastructure

## Settlement

There are no established communities within the LSA or RSA. The nearest communities to the project area are:

- Ross River an unincorporated First Nations community approximately 185 km north east of the project, under the governance of the Ross River Dena Council The population of Ross River was 327 in June 2004 and 329 in June 2003 (Yukon Monthly Statistical Review, July, 2004), approximately 99% of which are Ross River Kaska Dena (Profile of Yukon Aboriginals, 2001 Census).
- Watson Lake approximately 210 km south east of the project, incorporated as a town in 1984 and governed by an elected municipal council consisting of a mayor and four councillors. The population of Watson Lake in June 2004 was 1,553 (Yukon Monthly Statistical Review, July, 2004). Major economic activities include government services, tourism, transportation, forest harvesting, and mining. Tourism has shown steady growth from an annual summer tourist flow along the Alaska Highway.
- Faro located approximately 240 km northeast of the project area, established in 1966 as a housing and service centre for the Anvil mine. The mine has closed and the population of Faro has had wide fluctuations, but has been stable at approximately 360 for the last two years (Yukon Monthly Statistical Review July, 2004).

• Whitehorse - the capital and largest city in the Yukon, located about 285 km southwest of the project. With a population of 22,673 (Yukon Monthly Statistical Review, July 2004) Whitehorse has about 74.4% of the Yukon population.

The locations of these communities are shown on Figure 7.11-2. Further information on these settlements is contained in Section 7.14: Socio-Economic Conditions. The major Aboriginal group affected by the project is the Ross River Dena Council of the Kaska First Nation (Section 7.12: First Nations and Traditional Use).

# Figure 7.11-2 Settlement and Transportation Infrastucture (Vol. 2)

## Transportation Infrastructure

Transportation infrastructure affected by the project includes air and road transport systems in the Yukon (Figure 7.11.2). A national airline provides regular daily service to Whitehorse, which is also the base for a number of charter companies. The Watson Lake airport has paved runways, a terminal that is staffed part time and served by charter air services. Ross River and Faro have good quality gravel strips and small terminals. There is little air traffic except for occasional charters and local airline connections to Whitehorse in the summer. None of the airports operate at anywhere near full capacity.

There is a small airstrip adjacent to the Robert Campbell Highway, near Finlayson Lake, about 14 km north of the Kudz Ze Kayah access road junction. This gravel strip is only about 500 metres long and is unsuitable for upgrading to handle twin engine commuter airplanes. There is also a gravel airstrip at the project site that is suitable for handling twin engine freight aircraft.

The project will make use of the Stewart Cassiar Highway or the Alaska Highway south of Watson Lake (Highway 97) and the southern part of the Robert Campbell Highway, which connects Watson Lake and Carmacks via Ross River and Faro (both a few kilometres off the highway) (Figure 7.11-2).

The Alaska Highway has been upgraded in the last few years and is covered with pavement and "chip seal". Highway traffic is minimal during the winter months and, although it increases in the summer with the tourist traffic, it is still not yet up to design capacity (YTG Transportation Services). The Robert Campbell Highway is a secondary gravel highway. Upgrading has been carried out at the north end of the highway from Faro to Carmacks, in order to handle the concentrate trucks from Faro. In 1999 there was some upgrading at the south end, between Watson Lake and the Sä Dena Hes mine turn off (42 km), in anticipation of the re-opening of the Sa Dena Hes Mine. Due to poor market values, the mine was not re-opened. Traffic counts by the YTG Transportation Services have shown that only between eight and 12 vehicles per day travel between Ross River and Watson Lake in the winter months, October to April. During the 1995 summer months this traffic increased to an average of about 60 vehicles per day, with a peak of 86 in July. This was an increase from the 1993/4 average of 44 vehicles per day.

## Minerals

Mining is the primary sector of industrial development in the territory. Today there are over 45 companies conducting mineral exploration or active mining in the Yukon (Yukon

Mining 2005). The Department of Energy, Mines and Resources (EMR) is responsible for the development and management of Yukon minerals. The project is situated within the Watson Lake Mining District.

The area surrounding the project is very active from a mining perspective. Within the RSA alone there over 5100 quartz claims (active and expired) and one active coal exploration license. One 23 parcel mineral claim, owned by Teck Cominco Ltd., lies just north of the project. According to the Yukon Natural Resources map, compiled from 1999 MINFILE data (Yukon Energy Mines and Resources 2005), there are two mineral deposits, six mineral showings, four prospects and two past open pit producers within the RSA (Yukon Energy Mines and Natural Resources 2005b). The status of activities at identified exploration areas, prospects, the past open pits and past mines could not be confirmed with Yukon EMR. No coal mining leases, placer claims or potential diamond mining areas have been identified within or adjacent to the RSA. Just outside the RSA, however, seven major mineral deposits for lead, zinc, copper, gold and silver with mine development potential were identified (see Figure 7.11-3):

- Kudz Ze Kayah Property (Teck Cominco Ltd.) is a lead/zinc/copper/gold deposit located 35 kilometres west of the project. The property has an indicated resource of 11,300,000 tonnes. Teck Cominco Ltd. is currently evaluating the property for potential future development (Teck Cominco Ltd. 2005).
- GP4F Property (Breakwater Resources Ltd./Hunter Dickinson Inc.) is a lead/zinc deposit located 118 km southeast of Ross River. The property has an estimated 1,500,000 tonnes in mineral reserves and underwent 1556 m of exploratory drilling in 1998. The property is currently inactive (Yukon Energy, Mines and Resources 2004).
- Wolf Property (Atna Resources Ltd.) is a lead/zinc mineral deposit consisting of 33 mineral claims covering 689 ha, located southeast of Ross River and approximately 65 km from the project. The deposit has a calculated 4.1 million tonnes of mineralized material, 6.2% of which is zinc and 1.8% lead (Yukon Mineral Update 2004). This project is currently on hold.
- Fyre Lake Property (Pacific Ridge Exploration Ltd.) is a copper, gold consisting of 169 claims covering 85 km<sup>2</sup> east of Fyre Lake, 30 km southeast of the project (Yukon Mineral Update 2004). Measured and indicated resource estimates are for 15.4 tonnes of resource, 2.1% of which is copper. Pacific Ridge is currently seeking a joint venture.
- Ice Property (Yukon Zinc Corp.) is a copper deposit consisting of 1105 claims covering 22,000 ha located 60 km east of Ross River and about 6 4 km from the project area. There is an estimated 4,561,863 tonnes of mineral resource at the deposit, 1.48% of which is copper. (Yukon Mineral Update 2004). This property is currently inactive.
- Matt Berry (International Barytex Resources Limited) is a lead/zinc deposit located 161 north of Watson Lake and about 40 km due east of the project area. The property has an estimated 533 430 tonnes of mineral resource reserve. To date, over 4800 m of exploratory drilling has been completed, but the site is currently inactive (Yukon Energy, Mines and Resources 2004).
- Tintina (Tintina Silver Mines Limited) is a silver deposit located 116 km southeast of Ross River and about 65 km southwest of the project area. There is an estimated 90 719 tonnes of mineral resource reserve at the site. To date, a total of 7735 m of

exploratory drilling has been completed, but the site is currently inactive (Yukon Energy, Mines and Resources 2004).

# Figure 7.11-3 Mines, Mineral Deposits and Exploration Areas (Vol. 2)

## Oil and Gas

Potential oil and gas rich sedimentary basins within the Yukon are located primarily in the north portion of the territory, although there is a small gas basin in the Liard Plateau. There are currently no oil and gas wells, seismic exploration or dispositions located within or adjacent to the RSA (Geomatics Yukon 2005).

There is currently one pipeline project proposed by producers in Alaska's North Slope. The Alaska Highway Pipeline Project (AHPP) is proposed to follow the Alaska Highway and would runs through southeast Yukon well south of the project area. The Yukon government supports the construction of the pipeline project as it will provide significant benefits to the Yukon, including jobs, business opportunities and access to gas (Yukon Oil and Gas 2005). Recent US legislation in October 2004 provided key fiscal incentives to advance the project. It is currently estimated that the AHPP will be on stream in 2012-2015 (Yukon Oil and Gas 2005).

## Forestry

The Forest Management Branch of the Department Of Energy, Mines and Resources oversees the development and management of Yukon's forest resources. Applications for and allocation of wood and timber permits (for over 1000 m<sup>3</sup>) on Yukon land are issued by the Forest Management Branch (Yukon Forestry Management 2005). Yukon and First Nation governments work jointly to develop forest management plans that will apply to both First Nation and public lands. The territory is divided into 13 forest management units and 14 First Nation traditional territories. The Yukon and First Nation governments are responsible for the final approval and implementation of forest management plans in lands under their jurisdiction (Yukon Forestry Management 2005b).

There are currently three collaborative forest management plans underway: the Champagne & Aishihik, Teslin Tlingit, and Kaska Nation traditional territories. An environmental assessment screening for an interim wood supply plan for the Kaska Yukon Traditional Territory has been finalized (Yukon Forestry Management 2005c). Although the project is located within the Kaska Traditional Territory, the area covered by the interim wood supply plan (East Hyland) lies to the east of Watson Lake, well outside of the RSA. Other areas of interest for Interim Wood Supply within the Kaska Traditional Territory are Watson Lake, Ross River and West Rancheria. No plans, reviews or assessments have been conducted to date (Kaska Forest Resources Stewardship Council 2005). There are no existing environmental assessments or forest management plans in the RSA.

# Agriculture

The Yukon has approximately 12,500 ha of land devoted to agriculture. Just under half of this land is cropland with the remainder used for pasture or grazing. An additional 20

percent is under development for future agricultural use. A majority of the agricultural lands in the Yukon are located near the major communities. Seventy percent of the Yukon's farms are located within 100 km of Whitehorse (Yukon Agriculture 2005). There are no lands used for existing agriculture or slotted for future agricultural development in the RSA.

# Non-traditional Sport Fishing

Both Yukon Environment and the federal Department Fisheries and Oceans (DFO) regulate fishing and angling in the territory. DFO manages salmon fishing in the territory through the use of Salmon Conservation catch cards. The Yukon government manages other fish species. There are no closed seasons or closed areas in Yukon waters. Fisheries management is achieved through size selective harvest and the encouragement of live release fishing (Yukon Environment and Fisheries and Oceans Canada 2005). Angling during spawning seasons is not prohibited, but it is strongly discouraged. Barbless hooks are also encouraged in all Yukon waters, but are regulated only on Conservation Waters and some Special Management Waters.

Arctic grayling, northern pike, whitefish and lake trout are present in all drainage systems in the Yukon. In the Liard River drainage: bull trout, burbot, longnose sucker and cisco are also present. Lake trout is one of the most popular sport fish in the Yukon.

Numerous studies have been conducted on watersheds in the project area at various times and locations since 1996. Refer to Section 7.8: Fish Resources and Appendix 3E of the Project Description report (Gartner Lee 2004) for the methods and findings of these investigations. Overall, six species of fish have been recorded in the project area, only four of which are sport fish:

- Arctic grayling (Thymallus arcticus)
- lake trout (Salvelinus namaycush, Walbaum)
- burbot (*Lota lota*)
- bull trout (Salvelinus confluentus)

Low numbers of northern pike have also been recorded in Money Creek.

Three lakes have been designated as Conservation Waters within the land use RSA: Little Wolverine Lake, Wolverine Lake and Frances Lake. McEnvoy Lake, located just outside the RSA, has also been designated as Conservation Waters. Effective May 2005, slot limits have been imposed on Conservation Waters to further assist in species management. See Table 7.11-2 for general catch and possession limits and Table 7.11-3 for catch and possession limits for Conservation Waters.

Species	Daily Catch Limit	Comment
Lake trout	3	Only one lake trout in your possession <sup>1</sup> may be longer than 65
		cm (26 in.)
Bull trout	2	Only one bull trout in your possession may be longer than 50
		cm (20 in.)
Arctic grayling	5	Only one grayling in your possession may be longer than 40
		cm (16 in.)
Northern pike	5	Only one pike in your possession may be longer than 75 cm
		(30 in.)
Salmon	2 (aggregate limit)	Only one may be a chinook salmon
Salmon	5	In stocked lakes (Marcella, Judas, Scout)
Kokanee salmon	5	
Arctic char	2	Wild populations
Arctic char	5	In stocked lakes
Rainbow trout	5	
Dolly Varden	5	
Whitefish	5	
Inconnu (sheefish)	1	
Cisco	5	
Burbot	10	

# Table 7.11-2 General Catch and Possession Limits for the Yukon

Source: Yukon Environment and Fisheries and Oceans Canada 2005

Notes: 1. Possession Limits are twice the daily catch limits

# Table 7.11-3 Catch and Possession Limits for Conservation Waters

Species	Daily Catch Limit	Comment		
Lake trout	2	All lake trout between 65 and 100 cm (26 to 39 in.) in length		
		must be released. Only one lake trout in your possession <sup>1</sup> may		
		be longer than 100 cm (39 in.)		
Northern pike	4	All pike between 75 cm and 105 cm (30 to 41 in.) in length		
_		must be released. Only one pike in your possession may be		
		longer than 105 cm (41 in.)		
All other species		Are subject to the General Catch and Possession Limits in		
-		Table 3-1		

Source: Yukon Environment and Fisheries and Oceans Canada 2005

**Notes:** 1. Possession Limits are the same as the daily catch limits

# Non-traditional Hunting

The Finlayson region contains very high wildlife values. Wildlife resources in the immediate project area and surrounding region include the Finlayson Caribou Herd, moose, black bear, grizzly bear, wolf, fox, coyote, wolverine, marten, mink, river otter, beaver, several raptors, ptarmigan, various waterfowl, and a variety of other forest birds. The lakes and small ponds/wetlands provide breeding and migratory habitats for waterfowl and other aquatic birds (Section 7.10: Wildlife). The Finlayson Lake/River area and the east slope of the Pelly Mountains are part of the Tintina Trench migration

corridor and are used extensively by waterfowl and other waterbirds, including trumpeter swans and sandhill cranes, on their north-south migrations. One of the most significant wildlife resources in the area is the Finlayson Caribou Herd. This woodland caribou herd is highly valued as a subsistence base for the Ross River Dena, by resident sport hunters and the Yukon guiding industry. Finlayson region moose are also an important resource for the same user groups, including the Ross River Dena. The Finlayson region contains some of the highest recorded moose densities in Yukon. The Yukon Department of Environment regulates hunting in the territory and has established Game Management Areas (GMAs) for the management of wildlife species. GMAs are legal boundaries that define an area within which big game management objectives can be met through the setting of area specific regulations (Yukon Geomatics 2005). GMAs are a combination of Game Management Zone (GMZ) and Game Management Subzone. There are 443 GMAs in the Yukon which are grouped together into 11 Zones. With the exception of National Parks, the entire Yukon is covered by GMAs. The Land Use RSA falls within GMZ 10 (subzone 1007, 1008, 1009) and GMZ 11 (subzone 1116, 1117, 1121 and 1122) (see Figure 7.11-4).

Target species for hunting in the Yukon include: moose, caribou, black bear, grizzly bear, mountain sheep, wolves, wood bison and occasionally mountain goats. Mountain goats are rare in the Yukon and harvest of this species is closely regulated (Yukon Fish and Wildlife 2005). Refer to Section 7.10: Wildlife for additional information on hunter harvest in the project area.

# Figure 7.11-4 Game Management Areas (Vol. 2)

# Trapping

The Yukon is home to fourteen species of furbearing mammals that are trapped for their fur: beaver, coyote, fisher, coloured fox, Arctic fox, lynx, marten, mink, muskrat, otter, squirrel, weasel, wolf and wolverine. Over 400 Yukoners hold trapping licenses; most are registered trapping concession holders, and the others are assistant trappers. Approximately 50 percent of Yukon trappers are First Nations (Yukon Fish and Wildlife 2005b). Yukon Department of Environment has established trapping areas to regulate the harvest of fur-bearing species. A registered trapping concession (RTC) is a parcel of land on which the holder is given exclusive rights to harvest furbearing animals. There are 360 registered trapping concessions in the Yukon and 13 group areas each held by a collective group of members of the local First Nations community. Trapping seasons for fur-bearing species are listed in Table 7.11-3.

Environment Yukon keeps track of the annual fur harvest by monitoring trapping licences, export permits, fur dealer and taxidermist records and sealing certificates (Yukon Fish and Wildlife 2005b). Individual harvest information is confidential and is not normally released without the written permission of the RTC holder. Cumulative trapping harvest data for a number of lines in the vicinity of the RSA are provided in Section 7.9: Wildlife.

Within the RSA there are five RTC areas identified: RTC 249, 252, 255, 259 and 405 (Figure 7.11-5). The Ross River Dena Council holds the group trapping rights in the immediate vicinity of the project. No one person owns a trapline, but trapping takes place

on Group Traplines. The Ross River Dena Council has management responsibility for the Group Trapline. The traditional knowledge study in preparation by the Kaska Dena will address any concerns related to project effects on Kaska traditional interests, including trapping.

# Figure 7.11-5 Registered Trapping Concessions (Vol. 2)

# Table 7.11-4Trapping Season in the Yukon

Species	Open Season
Beaver	Oct 1 - May 31
Fisher	Nov 1 - Feb 29
Fox - red, cross, silver	Nov 1 - Mar 10
Fox – arctic	Nov 1 - Mar 31
Lynx	Nov 1 - Mar 10
Marten - see quotas p. 8	Nov 1 - Feb 29
Mink	Nov 1 - Feb 29
Muskrat - N. of Arctic Circle	Oct 1 - Jun 10
Muskrat - S. of Arctic Circle	Oct 1 - May 31
Otter	Nov 1 - Mar 31
Squirrel	Nov 1 - Mar 31
Weasel	Nov 1 - Mar 31
Wolverine	Nov 1 - Mar 10
Wolf	Nov 1 - Mar 10
Wolf - neck snare only	Nov 1 - Mar 31
Coyote	Nov 1 - Mar 10

Source: Yukon Fish and Wildlife 2005c

# Guide Outfitting

Outfitter Concessions (OCs), also known as Outfitting Areas (OAs), are legal boundaries that define an area where the holder of the concession has the exclusive right to outfit non-residents for the purpose of hunting big game animals (excepting special guiding licenses). If a non-resident wishes to hunt in the Yukon they must do so accompanied by a Yukon resident - either a private individual who does this for free, or a commercial operator who does this as a business (an outfitter). Each outfitter is licensed to operate within a particular OA. There are 20 such concessions in the Yukon, one per licensed outfitter. OAs are largely (but not always) defined by groupings of Game Management Areas. There are several areas within the Yukon (exclusive of National Parks) that are not covered by OAs (Yukon Geomatics 2005).

A majority of the RSA falls within OC #20, although there is a small portion at the eastern end of the RSA that falls within an area that is not designated as an OC (Figure 7.11-6). Ken Reeder of Teslin Outfitters Ltd. holds the commercial guiding rights for the project area (Teslin Outfitters 2005). The primary game in OC #20 are stone and Fannin

sheep, grizzly bear, caribou, Alaska/Yukon moose, wolves and wolverine. Game birds consist of ptarmigan and grouse.

# Figure 7.11-6 Outfitter Concessions (Vol. 2)

#### Tourism and Non-Consumptive Recreation

The region surrounding the project supports little formal recreation or tourism. Watson Lake to the south and Whitehorse to the east provide more formal recreational and tourism opportunities.

Locally, Frances Lake is the main recreational attraction. Two recreational operations are located on Frances Lake: Frances Lake Campground and Frances Lake Wilderness Lodge. The Frances Lake campground is a government run campground with 24 campsites, a kitchen shelter and a boat launch (Bell's Travel Guide 2005). The Frances Lake Wilderness Lodge is located on the south end of Frances Lake between its two arms. The lodge consists of the main log cabin (with a kitchen, dining room, library and living room) and five log guest cabins. Guest showers and a four-person sauna are located in separate log building (Visit Yukon 2005). Activities include daily guided excursions; canoeing, hiking, wildlife viewing, photography, fishing and aurora viewing (in September). The lodge is also open for winter activities such as cross-country skiing, snow-shoeing and ice fishing.

There are several recreational opportunities outside the RSA, including campgrounds at Simpson Lake, Lapie Canyon and Faro. Anita LaFave operates a tourist facility called Inconnu Lodge on McEvoy Lake, located north of Finlayson Lake. The Trans-Canada Trail follows the Alaska Highway and provides excellent hiking and snowmobiling opportunities. The Canol Heritage Trail extends from Johnsons Crossing to the border of the NWT, passing through the community of Ross River. Figure 7.11-7 depicts the recreational areas within the RSA and the surrounding region.

# Figure 7.11-7 Protected Areas and Recreation Sites (Vol. 2)

## **Protected Areas**

Yukon Parks, a branch of the Department of Environment, is responsible for a system of parks (natural environment parks, ecological reserves and wilderness preserves) and campgrounds throughout the territory (Yukon Environment 2005). The Yukon Protected Areas Strategy (YPAS) was approved by the Yukon territorial government in 1998 with the mandate to develop a complete network of protected areas in the territory based on ecosystem management, conservation biology, sustainable economies and heritage values (National Round Table on the Environment and the Economy 2005). The YPAS process identifies and designates protected areas in each of the unrepresented ecoregions in the Yukon. The project is located within the Liard Basin, which was identified as one of the unrepresented ecoregions (New Parks North 2005). The Government of Yukon put the YPAS on hold in early 2003, although scientific and technical assessment work continues within the ecoregions.

No special management or habitat protection areas, heritage rivers, National Wildlife Areas, or wildlife sanctuaries are identified within the RSA (Yukon Parks 2005, Yukon Parks 2005b). There is one Territorial Park and one proposed National Park outside of the RSA (Figure 7.11-7). Coal River Springs Territorial Park is located to the east of Watson Lake. This park is a 16 square kilometre area encompassing the springs. It was established as an ecological reserve to protect its fragile tufa formations (Yukon Parks 2005c). The Wolf Lake (Gooch Aa) area is one of three priority areas identified for protected areas planning in the Yukon under YPAS (New Parks North 2005b). Parks Canada held initial discussions with the Teslin Tlingit Council and the Teslin Renewable Resources Council in 1998 concerning a possible feasibility study for a new national park in the Wolf Lake area. There are mixed opinions regarding the establishment of the park and to date no agreement has been reached. If support by the communities is forthcoming, a feasibility study will be conducted (New Parks North 2005b). Several First Nations Interim Protected Lands ("R-Blocks") are located within the vicinity of the project and access corridor (see Figure 7.11.7). These lands are held for future First Nations settlement claims and are not available for resource development.

# 7.11.3 Effects Assessment Methodology

To characterize the potential range of project effects on land use and land tenure, activities and operations were assessed for the nine VECCs for the construction/operations and closure phases. Where effects are identified, mitigation measures are recommended to reduce or eliminate these effects. Residual effects remaining after mitigation are characterized.

The level of project effects is difficult to determine for the non-traditional land use discipline, as there is a lack of specific guidelines or thresholds acceptable levels of activity. In part, this is due to the inability to quantitatively determine impacts on a VECC for which there is no numerical base. For example, it is difficult to predict a quantitative change in informal recreational activities, perceived enjoyment of an activity, or harvest levels for sport hunting and fishing. Therefore, a qualitative method based on professional judgement and with linkages with other disciplines was employed. The determination of the level of project effects on land and tenure use were characterized in terms of direction, magnitude, geographical extent, duration, frequency, reversibility and likelihood of occurrence of the impact, according to criteria in Table 7.11-5.

A project or cumulative effect is deemed significant if it is adverse, high magnitude, local to regional extent and medium to long term. Otherwise, effects are rated as not significant.

# 7.11.4 Project Effects

The project will include the construction, operation, decommissioning and closure of mining and ore processing facilities and associated infrastructure. Development of the project has the potential to effect resources on the land and, in-turn, how those resources are used (i.e. land use). Project activities are identified as having either a direct or an indirect effect on land use and tenure. Direct effects (e.g., loss of land base, change in access) result from site clearing and construction of facilities and the access road. Indirect effects (e.g., changes in available resources resulting from effects to wildlife and fish abundance and distribution) may result from physical effects and disturbance related to construction, operation and decommissioning.

Attribute	Definition					
	Direction					
Positive	Effect improves the status or condition of VECC					
Adverse	Effect worsens the status or condition of the VECC					
Neutral	Effect has no change on the status or condition of the VECC					
	Magnitude					
Low	No effect or negligible effect to VECC					
Moderate	Effect on VECC is detectable, but within a normal range of variation					
High	Effect on VECC is detectable, but outside normal range of variation					
	Geographic Extent					
Site-specific	Effect on VECC within disturbance footprint					
Local	Effect on VECC within Local Study Area (LSA)					
Regional	Effect on VECC within Regional Study Area (RSA)					
	Duration					
Short term	Effect on VECC is limited to the construction period					
Medium term	Effect on VECC occurs through the operational phase					
Long term	Effect on VECC lasts extends beyond the operational phase					
	Frequency (Short term duration effects that occur more than once)					
Low	Effect occurs once					
Moderate	Effect occurs more than once					
High	Effect occurs continuously					
	Reversibility					
Reversible	Effect is reversible					
Irreversible	Effect is irreversible					
Likelihood of Occurrence						
Unknown	Effect on VECC is not well understood and based on potential risk to the VECC or its economic					
	or social/cultural values, effects will be monitored and adaptive management measures taken, as					
	appropriate					
High	Effect on VECC is well understood and there is a high likelihood of effect on the VECC as					
	predicted					

# Table 7.11-5 Effect Attributes for Land and Tenure Use

# 7.11.4.1 Settlement and Transportation Infrastructure

Approximately 121 people will be required for both the mine and mill operations. A majority of these people will come from the local communities of Watson Lake, Ross River and Whitehorse, resulting in an economic benefit and increased employment in these communities. Several First Nations Interim Protected Lands ("R-Blocks") are located within the vicinity of the project and access corridor. These lands are withdrawn from any future development or land use plans until they are selected or released by the First Nation during the land claims negotiation process. Although these blocks are in close proximity to the project operation areas and access corridors, there will be no development within these lands and therefore they will not be directly affected by any phase of the project. Project effects on settlements are expected to be mainly socio-economic. Socio-economic effects on settlements are discussed in Section 7.14: Socio Economic Conditions.

Construction activities for the mine and mill facilities will include expansion of the existing airstrip at the project site and development of an access road from the mine site to the Robert Campbell Highway. During operations, transportation of concentrates and supplies will result in additional truck traffic on the Robert Campbell and Stewart Cassiar

highways or possibly the Alaska Highway (Section 2.11: Transportation). Impacts may include slowing traffic movement, decreased visibility from dust and snow increasing the potential for accidents and collisions with wildlife, and increasing noise in communities along the highways. The increase in traffic load on the Robert Campbell Highway between the site and Watson Lake will be most noticeable, especially during the winter. Other mining developments such as those at Cantung and Faro have had similar effects on the Robert Campbell Highway in the past. Effects of traffic increases and mitigation measures are discussed in Section 7.14: Socio Economic Conditions.

The effect of the project on road transportation during operation are expected to be adverse in direction for the Robert Campbell Highway and neutral to positive for the other highways and air traffic. Effects for all highways will be of moderate magnitude, regional, medium term and ultimately reversible.

A majority of the employees required for operations will be flown in from Watson Lake, Whitehorse and Ross River using fixed-wing aircraft. The existing airstrip at the project site will be extended to handle the additional air traffic (Section 2.11: Transportation). Project effects on air transportation are expected to be mainly economic. Economic effects of increased air travel due to the project are discussed in Section 7.14: Socio Economic Conditions. Increased air flight in the project area could affect other land uses. In order to minimize disturbances from aircraft on local residents and wildlife and associated land use activities, YZC will establish standard flight corridors, with appropriate avoidance windows in consultation with YTG and the Kaska Dena. As a result, disturbance effects of aircraft overflights on other users are expected to be low.

During decommissioning there will be a 5-year period of ongoing activities associated with reclamation, monitoring and treatment of the tailings pond water and related site access, accommodation and power generation. At closure all minesite facility areas will be reclaimed and revegetated. The tailings pond will be reclaimed as a permanent pond and the access road and airstrip will remain in place. The residual effect of the project at closure will be to leave the access road and airstrip in the area; there will be no further effects of project-related transportation activities on existing infrastructure at closure. The effects of this additional infrastructure could range from positive to negative depending on the use of these facilities and attendant management requirements. Accordingly effects of the project on transportation infrastructure at closure will be positive to adverse, moderate magnitude, long term and reversible, depending on the ultimate fate and management of the access road and airstrip.

The retention of the access road and airstrip could affect other land uses in the project area. These effects could range from positive to negative depending on the management and level of use of those facilities. Enhanced road access could improve opportunities for trapping, hunting, fishing and non-consumptive recreational use in the area. Increased road and air access could enhance or reduce the attractiveness of the area for guide outfitting and potentially, over time, disturb or reduce game species populations that support these activities. Available access could facilitate further exploration and mineral development. Effects of access on other land uses are characterized in subsequent sections.

## 7.11.4.2 Mineral and Oil and Gas Activity

The Franklin District is very rich in volcanogenic massive sulphides (VMS) and there has been a renewed interest in the area from a mining perspective. There are over 5100 quartz claims (active and expired) within the RSA and one active coal exploration license. The

closest claim is a 23 parcel mineral claim, owned by Teck Cominco Ltd. that lies just north of the project. There are no current activities or planned developments at this site. Seven major mineral deposits occur just outside the RSA, all of which are currently inactive or on hold. The Kudz Ze Kayah Property (located 35 kilometres west of the project), however, is currently being evaluated for potential future development (Teck Cominco Ltd. 2005). The nearest active mining operation to the project is the Cantung Mine located the on the Yukon/Northwest Territories border. This mine reopened in August 2005 and should be producing tungsten for shipment in September 2005. The closest exploration activities are at the Tay-LP gold property (Ross River Minerals Inc.), located 50 kilometres south-southwest of Ross River. Nine drill holes were completed in 2004, with additional exploration planned for 2005. Although the area encompassed by the RSA has large potential for future mining activities, there are currently no active mining or exploratory operations that overlap in time or space with the proposed project. The project will not alienate mineral resources from exploration or development by other interests and the road and airstrip may facilitate access to other resources. The effect on mineral activities will be neutral to positive in direction, low in magnitude, site-specific in extent, long term in duration and reversible at closure. Since the extent of existing developments and disclosed mining proposals in the area is known, the likelihood of effects on mineral activities is high.

A majority of the oil and gas rich basins in the Yukon are located in the north portion of the territory, although there is a small gas basin in the Liard Plateau. There are currently no oil and gas wells, seismic exploration or dispositions located within or adjacent to the RSA. There will be no effect on oil and gas activities from any phase of the project.

# 7.11.4.3 Forestry and Agriculture

Currently no forestry or agricultural tenures have been identified close to or in the LSA or RSA. The nearest agricultural tenures are in the vicinity of Whitehorse. The closest Interim Wood Supply plan area lies to the east of Watson Lake, well outside of the RSA. Other areas of interest for Interim Wood Supply within the Kaska Traditional Territory are Watson Lake, Ross River and West Rancheria, but no plans, reviews or assessments have been conducted to date (Kaska Forest Resources Stewardship Council 2005). There are no existing environmental assessments for forest management plans in the RSA. Therefore, there will be no impact on forestry or agricultural resources from any phase of the project.

# 7.11.4.4 Non-traditional Sport Fishing

Aquatic resources (fisheries and benthic communities) can be directly affected through physical alteration of habitat for development purposes or indirectly affected by changes in water quality and hydrology resulting from mine construction and operation activities. These can in turn potentially affect the productivity of the fishery for sports fishing purposes. Changes in access can also affect the level of fishing activity at the project site or at near-by fishing areas and lodges.

The nearest sport fishing lodges to the project area are located at Frances and McEvoy lakes (located just outside the RSA). Warren LaFaye's operations included some fly-in use at McEvoy Lake from June through August, but he was not using the project area to any significant extent (Gartner Lee 2004). Fishing activities carried out from the Frances Lake Wilderness Lodge are focused primarily on Frances Lake and will not be directly affected by project activities. Increased visitation and awareness of the area due by

project personnel may result in increased visitation to these lodges. Upgrades and improved maintenance of Robert Campbell Highway to support mine-related traffic could also increase attractiveness to tourist traffic and increase use of the lodges. On the other hand, increased truck traffic on the highway from the project may discourage use of the highway. So effects of the project could range from positive, through neutral to adverse.

In the project area, much of the headwater and tributary reaches of Go, Money and Light creeks, potentially affected by the project support limited fish habitat values and little or no observed fish use. The major sport fishery in the project area is in Wolverine Lake. No effects on fisheries in Wolverine Lake due to changes in water quality are expected during operations. At closure, there is a possible effect of elevated metals in Wolverine Creek and Little Wolverine Lake due to groundwater discharges from the backfilled mine workings. Mitigation measures, monitoring and adaptive management during operations are expected to minimize this risk. The Wolverine drainage also has naturally elevated metals levels at some times of the year due to natural effects of the mineralized zone. The potential for effects on sport fish populations due to this effect is unknown, but with options for effective mitigation, is expected to be low. (Section 7.8: Fish Resources)

An increased workforce in the area, although relatively small, will potentially result in increased fishing pressures on fish stocks in lakes and fish-bearing streams in the area. The mine area will be restricted from public access during operations. Wolverine and Little Wolverine lakes are designated Conservation Waters. The potential impacts of increased fishing pressure from project personnel will be managed through government imposed harvest and season restrictions. As noted in section 7.8, an employee environmental awareness program will support sustainable fishing practices in accordance with territorial regulations. At closure, the presence of the road and airstrip may enhance opportunities for recreational fishing, depending on the management of the road at that time.

In summary, the effects of the project on non-traditional fishing activity are expected to be positive through adverse in direction, low to moderate in magnitude, regional in extent and medium to long term in duration and ultimately reversible, depending on the long term fate and management of the access road and airstrip. The likelihood of effects on existing sport fishing lodges and on fishing opportunities and activities in the project area is unknown due to the subjective nature of user response to project effects and the unknown status of management measures on the access road at closure.

# 7.11.4.5 Non-traditional Hunting, Guide Outfitting and Trapping

Project facilities and operations have the potential to affect wildlife numbers and distribution for wildlife species that inhabit or migrate through the area and indirectly affect hunting, trapping and guiding opportunities and success. The project can also directly affect these activities due to potential changes in local access patterns. Since the Ross River Dena Council has management responsibility for the Group Traplines in the RSA, project effects on trapping will be considered, as appropriate, in the context of the traditional knowledge study being conducted by the Kaska Dena (Section 7.12: First Nations and Traditional Use). Effects will be mitigated to the mutual satisfaction of YZC and the Kaska.

No significant effects on wildlife populations that support hunting and guiding are expected during the life of the project because of the low level of project effects on habitat availability and implementation of various mitigation measures to prevent wildlife mortality (controlled access, prohibition of fire arms, speed limits on access routes, etc.)

(Section 7.9: Wildlife). The presence of the mine access road will not enhance opportunities for hunting or outfitting during operations, due to these same mitigation measures. However, the presence of the mine may limit suitability of the immediate area for guide outfitting. The majority of the RSA falls within OC #20, in which Ken Reeder of Teslin Outfitters holds the commercial guiding rights. This concession area does not include special designations or land use rights that affect the project. Accordingly project effects on hunting and guide outfitting during operations are expected to be neutral to adverse, low magnitude, local, medium term and reversible. The likelihood that effects on hunting during operations will occur as predicted is high because of YZC's commitment to mitigation measures. Because the current level of guiding in the RSA is uncertain and the potential for increased business to local guide outfitters from project personnel is unknown, the likelihood of effects on guide outfitting concessions is unknown.

At closure there is the potential for increased mortality and potentially significant effects on moose populations, depending on the management of the access road at closure (Section 7.10: Wildlife). The effect on hunting and guiding activity could be initially positive due to enhanced access, changing to adverse if moose populations decline. In the context of opportunities for moose hunting in the SE Yukon, effects are expected to be moderate in magnitude, regional, long term and reversible in the context of territorial moose population management options. As the current level of hunting and guiding is not well documented and the management of the access road at closure is unknown, the likelihood of effects occurring as predicted is unknown.

# 7.11.4.6 Tourism and Non-consumptive Recreation

Enhanced maintenance and potential improvements to the Robert Campbell Highway as a result of project related traffic might attract increased tourist use for non-consumptive recreation or use of existing campground and lodge facilities. As noted above, increased awareness of the area by project personnel might result in increased use of recreational facilities and opportunities in the area. On the other hand, increased truck traffic for mine operations may counteract the potential positive effect.

The project access road will not affect tourism and recreation during operations as public access will be restricted. At closure, the access road might provide enhanced opportunity for recreational use in the project area, depending on management of the road at that time. Informal activities such as all-terrain vehicle (ATV) use, snowmobiling, cross-country skiing and hiking could potentially benefit from increased access.

Accordingly project effects on tourism and non-consumptive recreational effects are expected to range from positive through adverse, low to moderate magnitude, regional, medium to long term and potentially reversible, depending on management of the access road at closure. Because of the subjective nature of recreational users' response to the conditions on Robert Campbell Highway and uncertainties associated with the management of the access road at closure, the likelihood of effects occurring as predicted is unknown.

# 7.11.4.7 Protected and Environmentally Significant Areas

No special management or habitat protection areas, Heritage Rivers, National Wildlife Areas, or wildlife sanctuaries are identified within the RSA. Therefore, there will be no effect on these areas from any phase of the project.

# 7.11.4.8 Residual Project Effects and Significance

The project is expected to have low to moderate magnitude of effects on road transportation, mineral activities, sport fishing, hunting, guide outfitting and tourism and recreation. Positive effects include enhanced opportunities for mineral development, fishing, hunting, outfitting and non-consumptive recreational activities associated with enhanced access at closure. Negative effects include potential reduced attractiveness for some recreation uses due to project-related traffic and disturbances during operations and potential reduction in regional moose populations due to over-hunting along the access road at closure. Effects will mostly be local but some will extend to regional transportation infrastructure and tourism facilities, and regional opportunities for moose hunting. All effects will be moderate to long term and ultimately reversible, although functionally they may be irreversible if the project access road and airstrip remain active in perpetuity.

Based on the criteria provided in Section 7.11.3, these effects are determined to be not significant. The likelihood of effects is unknown due to a host of external (e.g., mineral prices, economic conditions) and internal (e.g., subjective response of land users to project effects, uncertainties regarding management of the access road after closure) factors that will affect land use patterns in the area.

# 7.11.5 Cumulative Effects and Significance

The only other known project activities that could interact with project effects on land use is the increased traffic on the southern leg of the Robert Campbell Highway associated with operation of the Cantung mine. As noted above, improvements in the highway and maintenance may attract more use of the highway and higher levels of activity associated with recreational facilities, informal recreation, hunting, fishing and guide outfitting. Effects of increased truck traffic on the highway due concentrate hauling for both projects could deter use of the highway. Accordingly cumulative effects on land use from these sources are expected to be positive to adverse, low to moderate in magnitude, regional, long term and reversible. Based on the criteria provided in Section 7.11.3, these effects are determined to be not significant. The likelihood of effects is unknown due to a host of external (e.g., potential highway improvements, economic conditions and associated levels of tourism activity) and internal (e.g., subjective response of land users to project effects, uncertainties regarding management of the access road after closure) factors that will affect traffic and associated land use patterns in the area.

# 7.11.6 Mitigation Measures

Mitigation measures identified in other sections pertaining to protection of fish, wildlife, traditional use, and socio-economic conditions also protect the use of these resources. Follow-up consultation with YTG, the Kaska Dena and other interested parties is required to develop suitable management approaches to road infrastructure affected by the project. Based on the predicted insignificant effects of the project on land use and tenure, no additional impact mitigation measures are prescribed. Table 7-11-6 summarizes mitigation measures that will be applied to reduce effects on land use and tenure.

# 7.11.7 Monitoring and Follow-up

No project-specific monitoring programs are required related to effects on land use and tenure. Monitoring programs used for other disciplines will contribute to understanding of effects on land use and tenure. As noted above, follow-up consultation with the YTG, Kaska Dena and other interested parties is required to develop and confirm at suitable access management practices during the life of the project and at closure and to address project and cumulative effects on the use of the Robert Campbell Highway and related effects on land use in the area.

# Table 7.11-6 Mitigation Measures for Effects on Land Use and Tenures

Potential Project Effect		Mitigation Measures			
Potential project effects on settlement and		Refer to Section 7.14: Socio Economic Conditions			
transportation infrastructure during	٠	Consultation with YTG, Kaska Dena and other interest			
operations		holders, and agreement on management and mitigation			
		measures for Robert Campbell Highway			
Project effects on fish and wildlife affecting	٠	Refer to mitigation measures for fish (Section 7.8), wildlife			
fishing, hunting, trapping and guide outfitting		(Section 7.10), and First Nations and Traditional Use (Section			
uses		7.8)			
Potential effects of the project access road at	٠	Consultation with YTG, Kaska Dena and other interest			
closure on enhanced access for a range of		holders, and agreement on management and mitigation			
activities and reductions in regional moose		measures for the access road at closure			
populations and associated opportunities for					
hunting and outfitting					
Potential Cumulative Effect		Mitigation Measures			
Potential effects of the project and Cantung	٠	Consultation with YTG, Kaska Dena and other interest			
mine traffic on the southern leg of the Robert		holders to develop an agreement on management and			
Campbell Highway, affecting highway use		mitigation measures for the Robert Campbell Highway during			
and related tourism and recreational activity		operations			

# 7.11.8 Summary of Effects

Table 7.11-7 provides a summary of project effects assessment conclusions for the land use and tenure component.

# Table 7.11-7Program Effects on Land Use and Tenures

Potential Effect			Effect Rating <sup>2</sup>					
	Direction	Magnitude	Extent	Duration/ Frequency	Reversibility	Likelihood	Project Effect	Cumulative Effect
			All Pl	ases			•	
Transportation infrastructure – increased traffic on Robert Campbell Highway during operations	Positive to Adverse	Moderate	Regional	Medium term	Reversible	High	Not significant	Not significant
Transportation infrastructure – access road and airstrip remain at closure	Positive to Adverse	Moderate	Local	Long term	Reversible	Unknown	Not significant	N/A
Mineral activity – enhanced access for development activities	Neutral to Positive	Low	Site- specific	Long term	Reversible	High	Not significant	N/A
Non-traditional fishing activities – increased use of local lodges, effects on Wolverine Lake fishery (water quality, access) and fishing pressure from project personnel	Positive to Adverse	Low to Moderate	Regional	Medium to Long term	Reversible	Unknown	Not significant	N/A
Hunting and Guide Outfitting – operations (effects of access on opportunity, effects on wildlife populations, business for outfitters, decreased attractiveness of area for guiding)	Neutral to Adverse	Low	Local	Medium term	Reversible	High to Unknown	Not significant	N/A
Hunting and Guide Outfitting – closure (effects of access road on opportunity, wildlife populations)	Positive to Adverse	Moderate	Regional	Long term	Reversible	Unknown	Not significant	N/A
Tourism and non-consumptive recreation - operations (increased traffic in region affecting use of facilities)	Positive to Adverse	Low	Regional	Medium term	Reversible	Unknown	Not significant	N/A
Tourism and non-consumptive recreation - closure (effects of access road on opportunity for non-consumptive use)	Neutral to Positive	Low to Moderate	Local	Long term	Potentially reversible	Unknown	Not significant	N/A

Notes: 1 Based on criteria in Table 7.11-5

2 Based on criteria in Section 7.11-4 N/A = not applicable