Copper Fox Metals Inc.

Schaft Creek Project: Socio-Economic Baseline Study







Rescan™ Tahltan Environmental Consultants Sixth Floor - 1111 West Hastings Street Vancouver, BC Canada V6E 2J3 Tel: (604) 689-9460 Fax: (604) 687-4277

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SCHAFT CREEK PROJECT: Socio-economic Baseline Study

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Copper Fox Metals Inc.

Prepared by:



Rescan[™] Tahltan Environmental Consultants Vancouver, British Columbia

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Executive Summary





Executive Summary

The proposed Schaft Creek Project is situated in an area containing primarily small, remote communities. This report represents the baseline socio-economic conditions of primary (Tahltan Nation communities) and secondary (Stewart, Terrace and Highway 37) communities in the region of northwestern B.C., including a summary of current economic conditions, available infrastructure, skills and education levels and social and health issues. Socio-economic issues typically observed in the study communities are characteristic of a region in which the economy is strongly tied to fluctuations of the goods sector, specifically in regards to the forestry and mineral exploration industries. Currently this translates to a lack of employment, job training or education opportunities, as well as strains on community infrastructure.

In Tahltan Nation communities, high unemployment and a lack of economic diversity is a consistent problem compounded by their remoteness from major centres in the region. Education levels are typically low, though access to post-secondary education is available, and training in trades is relatively high. Infrastructure, including health and social services has been developed in all Tahltan communities to suit their specific needs, but face challenges associated with providing services to a large territory, including emergency services for sections of Highway 37.

Issues currently facing all communities in the region are tied to the decline in the forestry industry, high mineral prices and its effect on exploration activities, as well as the upcoming closures of the Huckleberry and Kemess mines. However, an economic focus on providing support for the mining and resource industry means that all primary and secondary study communities are well situated to see economic benefits by the proposed Project in the form of providing construction and operation support.

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Acronyms and Abbreviations





Acronyms and Abbreviations

AAC	annual allowable cut
ВС	British Columbia
BCFRT	British Columbia Forestry Revitalization Trust
BC ILMB	British Columbia Integrated Land Management Bureau
BC MEMPR	British Columbia Ministry of Energy, Mines and Petroleum Resources
BC MOFR	British Columbia Ministry of Forests and Range
BC MOTI	British Columbia Ministry of Transportation and Infrastructure
BC MSRM	British Columbia Ministry of Sustainable Resource Management
CFDC	Community Futures Development Corporation
CEGEP	Collège d'enseignement général et professionnel, literally translated as "College of General and Vocational Education
СМНС	Canadian Mortgage and Housing Corporation
CMSD	Coast Mountains School District
EA	environmental assessment
CPR	Cardiopulmonary Resuscitation
GDP	gross domestic product
GOABC	Guide Outfitters Association of British Columbia
HSDA	Health Service Delivery Area
INAC	Indian and Northern Affairs Canada
IVHS	Iskut Valley Health Services
LHA	Local Health Area
NCDES	North Coast Distance Education School
NIFC	Northwest Inter-nation Family and Community Service Society

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NHA	Northern Health Authority
NWCC	Northwest Community College
OCP	Official Community Plan
the Project	Schaft Creek Project
PYLL	potential years of life lost
RCMP	Royal Canadian Mounted Police
RDKS	Regional District of Kitimat Stikine
TCC	Tahltan Central Council
TEDA	Terrace Economic Development Authority
THREAT	Tahltan Heritage Resources and Environmental Assessment Team
TSAs	timber supply areas
UNBC	University of Northern BC

1. Introduction





1. Introduction

The Schaft Creek Project (the Project) is in northwestern British Columbia (BC), approximately 60 km south of the village of Telegraph Creek. It is within the Tahltan Nation's traditional territory.

Containing approximately 812 million tonnes of resources, the mine is estimated to have a 23-year mine life. Approximately 293,000 tonnes of concentrates will be produced by the mine each year, which will be transported via truck to the port of Stewart, BC, for onward shipping to markets.

Conventional 30-tonne trucks will be used to transport concentrate from the mine site to the Bob Quinn area along the Schaft and Galore roads. From Bob Quinn to Stewart, B-train commercial truck haulage will then be used along Highway 37 and 37A. There will be 30 concentrate trucks along this route over a 24-hour period, 7 days per week.

Electrical power to the mine site will be provided via a 138-kV transmission line, extending from Bob Quinn Lake to the Project along the proposed corridor for the Galore and Schaft roads. The proposed transmission line assumes that electrical power will be supplied from British Columba Transmission Corporation's proposed new 287-kV Northwest Transmission Line from a point near Bob Quinn Lake.

The mine will be a fly-in, fly-out operation, and is estimated to generate up to 2,100 jobs during the construction phase and approximately 700 permanent jobs during mine operations. A permanent camp will be constructed to support approximately 700 employees. Other facilities include a truck shop, warehouse, administration, maintenance laboratory, explosives storage, water treatment facilities, and potable water storage.

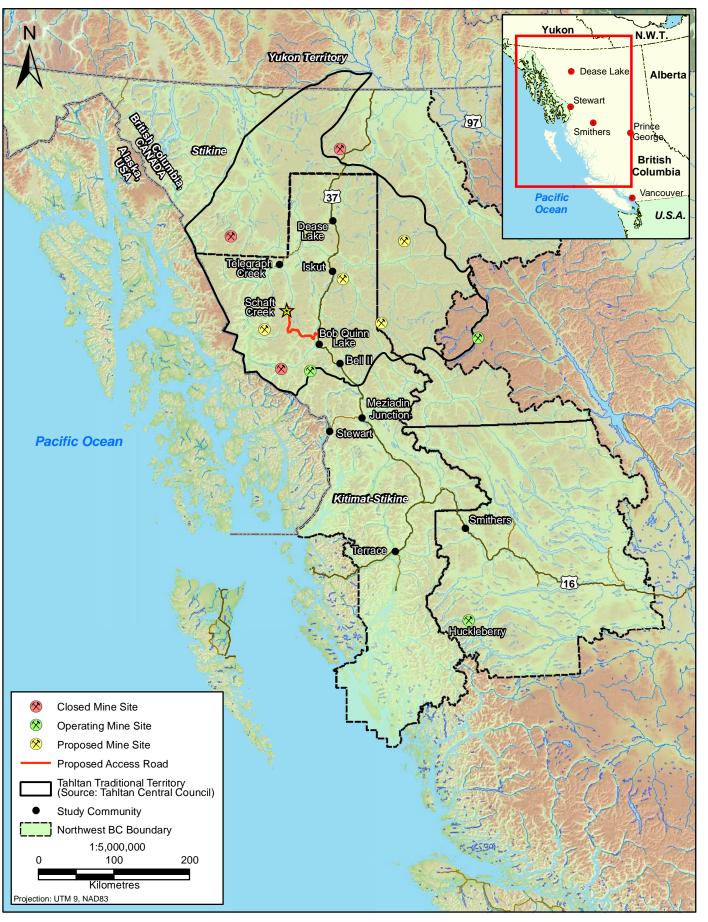
This report describes the current socio-economic profiles of the province, region, and communities surrounding or near the Project. Information includes:

- Provincial overview
- Regional overview
- Tahltan Nation and the communities of Telegraph Creek, Iskut, and Dease Lake
- Communities of Stewart, Terrace, and Smithers
- o Other settlements along Highway 37

1.1 STUDY AREA

The socio-economic baseline study area includes communities and the region that may experience social and/or economic related effects from the Project.

Figure 1.1-1 depicts the socio-economic study area for the Project, including the province, the northwestern region (particularly the Regional District of Kitimat Stikine (RDKS)), and communities included in the study area. Table 1.1-1 summarizes the different study area levels.





Schaft Creek Socio-Economic Study Area



Study Area	Description	Rationale
Provincial	British Columbia	Activities related to the Project will directly or indirectly contribute to the provincial economy through the demand for goods, services, and labour.
Regional	Northwestern BC Regional District of Kitimat-Stikine	The socio-economic effects triggered by the Project activities and requirements will be concentrated in northwestern BC and in particular, the Regional District of Kitimat-Stikine.
First Nations	Tahltan Nation Telegraph Creek Iskut Dease Lake	Primary study communities included in the study as they are inhabited by members of the Tahltan Nation, whose territory encompasses the Project. They are expected to be a source of labour and business contracting opportunities
Non-Aboriginal Communities	Stewart	Port destination for concentrate to be shipped to overseas markets
	Terrace Smithers	Regional service centres that will experience socio- economic effects from the Project and are a probable source of goods, services and labour
Other Settlements and Local Service Centres	Bob Quinn Lake Bell II Meziadin Junction	Small settlements and service centres along Highway 37 that may experience effects from the Project through hauling, access, and transportation needs.

Table 1.1-1. Summary of Study Area

At a broad level, the socio-economic baseline study boundary area includes British Columbia to reflect the potential effects of the Project on the provincial economy. A focus on northwestern BC addresses the potential regional effects of the Project. Effects may be direct, indirect, and induced by way of the goods and services that will be required by the Project. There are also the effects related to increased population, incomes, travel, and spending by new employees, contractors, and their families.

Community socio-economic baseline conditions for Telegraph Creek, Iskut, and Dease Lake are factored into the study area for three reasons:

- 1. Residents are mostly Tahltan Nation members, whose territory encompasses the Project.
- 2. These communities may be a source of labour and contracting services.
- 3. Residents who become employed at the mine will have incomes that support an increase in spending and therefore indirect economic effects to the communities.

Stewart is included in the study area because its port may be used to tranship concentrate from the mine to overseas markets. Various potential effects such as increased traffic and indirect economic effects through transportation and accommodation related demand are investigated.

Terrace and Smithers are regional centres of northwestern British Columbia, serving as service and transportation hubs for the region through their airports and location along Highway 16.

Other smaller settlements and/or service centres along Highway 37 have been considered in the baseline study. These include Bob Quinn, Bell II, and Meziadin Junction. Although not necessarily communities, these locales have either historically or currently serve as landmarks to those travelling or vacationing in the area. Baseline conditions are necessary to document in light of potential changes

in profiles to these settlements from the Project's contribution to traffic and general usage in these areas from employees, contractors, and the services they may require.

1.2 METHODOLOGY

1.2.1 Data Collection

Information was collected through desk-based research. This included research, review, and documentation of existing and available information from publicly available sources such as government databases (e.g., Statistics Canada and BC Stats); published literature; and public and unpublished reports. Data were also gathered from various government agencies (federal, provincial, and municipal), regional and community organizations, and individuals through their respective websites or by phone.

1.2.2 Socio-economic Data Components

When describing the baseline socio-economic conditions of a study area, numerous elements are considered to capture the inter-dependent nature of its social and economic aspects. Table 1.2-1 summarizes the elements considered during data collection.

Information	
Component	Description
Geo-historical Context	Location, history, and other relevant information pertaining to study communities.
Cultural Context	Cultural aspect of a community and societal values
Population	Population profile including demographics and migration patterns
Governance	Governance structure and political context
Economy and	Local and regional economies, economic drivers, and trends.
Employment	Labour force, including employment and unemployment rates, employment sectors, and challenges to employment.
Education	Education levels, literacy levels, educational institutions, programs, and services and associated issues/gaps/challenges.
Health	Health indicators, including fertility and mortality rates, life expectancy, and recorded occurrences of various illnesses/diseases, such as diabetes, tuberculosis, influenza, sexually transmitted diseases/infections, and suicide. Overview of health issues and services within the community (there is often a relationship between
	social and health issues, as well as between the quality/availability of services and the number/severity of reported issues).
Social	Social indicators including substance misuse, domestic and peer violence, crime, vandalism, dangerous and anti-social behaviours, and associated potential years of life lost (PYLL). Overview of social issues and services within the community.
Community and Institutional Services	Infrastructure such as health, education, social, and municipal services and programs, including areas of demand and gaps in existing services within each community.
Emergency and Protection	Police, fire, ambulance, and other protective services available to the communities.
Infrastructure	Utilities, transportation, and communication infrastructure and systems available to the community, including housing quantity, quality, and costs.

 Table 1.2-1. Socio-economic Baseline Information Components

1.2.3 Data Limitations

The socio-economic baseline study contains data limitations outside the control of the study. These include:

- Statistics tend to rely on one source: census data from Statistics Canada for 2001 and 2006. BC Stats and other provincial, municipal, and private sources of data use Statistics Canada Census data for analyses.
- Census statistical information is sometimes limited, especially for the smaller, rural communities and reserves because of confidentiality clauses around published data on personal information.
- Local Health Areas (LHAs) are the smallest government generated data aggregate of analysis. These aggregates usually represent multiple communities. Additionally, LHA data were often not available for small study communities. Because of the small size of most study communities and related confidentiality concerns, most of the socio-economic data available have been rounded, aggregated, and/or masked. As a result, differences between the communities may be either over- or under-estimated.
- Data that are not current. For instance, the BC economy has changed significantly over the past five to ten years. There has been significant economic uncertainty with the global market downturn in the fall of 2008.
- Variance in geographical and statistical definitions across information sources.
- Data inconsistency within regional subdivisions of the province.

2. British Columbia





2. British Columbia

2.1 OVERVIEW

The most western province in the country, British Columbia has many diverse regions. A mountainous coastal region borders the Pacific Ocean, with fjords and inlets; the interior of the province consists of both mountains and the interior plateau, with an arid desert in the south-central region. Most of the province's population is in the south, within 100 km of the US border, especially in the Lower Mainland area.

BC has the country's third largest population, representing 13% of Canada's population and approximately 12% of the national gross domestic product (GDP). An immigration influx has triggered a recent population growth in the last few years (BC Stats 2006b).

The natural resources sector has been the dominant economic driver in BC with forestry, mining, fishing, and agriculture historically being important. Oil and gas have become a major sector over the last few decades. In recent years, the provincial economy and its relationship to natural resource industries has been diversifying. The natural resource sector represented 13% of the province's provincial labour force in 1990, but by 2005 this percentage decreased to 9%. Smaller communities outside the Lower Mainland and Vancouver Island areas still heavily depend on the mineral, forestry, agricultural resource and fishing economies (BC Stats 2006b).

2.1.1 Goods Sector

The goods sector is composed of primary extractive and harvesting industries such as forestry, mining, fishing, and agriculture; and secondary manufacturing industries including construction, utilities, and food/wood/metal product manufacturing/processing. This section describes the goods sector, primary resource industries, and mining as they relate to the provincial economy and labour market.

The contribution of the goods sector to the provincial GDP has been steadily declining since the 1960s, contributing approximately 25% in 2007. The goods-producing sector's contribution to the provincial GDP in 2008 is presented in Table 2.1-1.

Industry	Percent of Total GDP (2008)
Agriculture	0.7
Forestry and logging	1.5
Fishing, hunting, and trapping	0.1
Mining and oil and gas extraction	3.0
Utilities	2.0
Construction	6.3
Manufacturing	9.4
Total, goods sector	23.7
Total, all industries	100.0

Source: (BC Stats 2008a).

The goods-producing sector's contribution to employment in the province is presented in Table 2.1-2. Construction generated the most jobs in the goods sector in 2009, accounting for 45% of employment in the sector. The construction industry has grown significantly since 2003, and surpassed the manufacturing industry in 2008 (BC Stats 2010), though the recent economic downturn has led to construction delays and had employment effects, some of which are still unfolding.

Manufacturing made up the second largest proportion of jobs in the goods sector in 2009 at 37%. Manufacturing jobs were associated with food and beverages; clothing, wood, paper and printing; petroleum and coal products; chemicals, plastics and rubber; metal and other mineral products; electrical, computer and electronic products; transportation equipment; furniture; and other products (BC Stats 2010).

Agriculture accounted for 8% of total goods sector employment, whereas mining and forestry were less significant, accounting for 5% and 3% of jobs in the sector, respectively. In particular, forestry employment experienced a decline from nearly 9% in 2000 (BC Stats 2010).

Industry	Employment (2008)	Percent of Total Employment (2008)	Employment (2009)	Percent of Total Employment (2009)
Agriculture	33,700	1.5	34,300	1.5
Forestry and logging with support			13,900	
activities	17,400	0.8		0.6
Fishing, hunting, and trapping	2,200	0.1	2,200	0.1
Mining and oil and gas extraction	25,800	1.1	24,200	1.1
Utilities	14,200	0.6	12,700	0.6
Construction	220,800	9.5	195,300	8.6
Manufacturing	187,400	8.1	163,800	7.2
Total, goods sector	501,500	21.7	446,500	19.8
Total, all industries	2,314,300	100.0	2,259,400	100.0

Table 2.1-2. BC Employment by Detailed Industry in 2008 and 2009

Source: (BC Stats 2010)

In 2008, the goods sector represented a greater proportion of provincial GDP (23.7%) than its share of provincial employment, which represented 21.7%. This is caused by higher levels of efficiency and productivity (e.g., the use of machinery and equipment) and a greater number of hours worked. This trend also relates to the recent strength of commodity prices, particularly minerals and energy (BC Stats 2006b, 2008a, 2010).

2.1.2 Mining Exploration and Development

2.1.2.1 Revenue from the Mining Industry

Global market demand, particularly from the Asia, created strong metal prices that helped catalyze the most recent mining boom in the province. There has been an influx of exploration investment in BC between 2004 and 2008, a period of strong markets, which created economic growth through investment and employment as well as provincial tax revenue generation.

Despite the global economic decline in the fall of 2008 triggering multiple mining project suspensions, BC still had an estimated \$367 million in mineral exploration expenditures in 2008. This

was a decrease from \$416 million in 2007, but it remained the second-highest investment on record (BC MEMPR 2009b).

A recent review of the mining industry, which included the participation of 40 companies across BC, confirmed strong growth in the mining sector in recent years, yet noted that some weakening occurred in 2007. Some key findings included:

- In 2008, gross mining revenues of \$8.4 billion represented an increase from the \$6.9 billion in 2007 and the \$8.1 billion of 2006, with strong coal prices and demand driving this.
- Pre-tax net earnings of \$3.2 billion in 2008 represented a \$1.5 billion increase from the \$1.7 billion for 2007, with strong coal prices and demand behind this gain.
- 2008 cash flow from operations was \$3.4 billion, representing an increase from the \$2 billion of 2007 and \$2.9 billion of 2006.
- The average number of people employed by BC mining increased to 7,607 in 2008 compared to 7,449 in 2007 and 7,345 in 2006 (PricewaterhouseCoopers 2009)

Government revenues from the mining industry are generated through royalties and taxes paid by mining companies and their employees (ENTRANS Policy Research Group Inc. 2008). The BC government received an estimated \$545 million in payments from the mining industry in 2008. This was an increase of \$82 million from the \$463 million received in 2007. Social, health, education, and other programs and services used by residents across the province benefit from the taxes generated through mining (PricewaterhouseCoopers 2009).

Mineral exploration spending in 2009 is estimated at \$154 million, while the total value of solid mineral production in the province was approximately \$5.7 billion. This marks the 6th highest expenditure levels in 20 years (BC MEMPR 2009a). The drop from 2008 is a reflection of the global economic crisis that year.

2.1.2.2 Mining Activity

Seventeen coal and metal mines operated in BC during 2009. There were 2 smelters, 30 industrial mine operations, and over 350 exploration projects (BC Mining Economic Task Force 2009). There were also significant numbers of placer mines and over 1,100 aggregate pits across BC. (BC MEMPR 2009a).

In 2009, there were 88 mineral exploration projects in BC and 30 mine development applications in process with the BC EAO and BC MEMPR, in addition to 6 projects that were permitted (BC MEMPR 2009a).

Coal, copper, and molybdenum remain BC's most important solid mineral products, respectively (BC MEMPR 2009a).

2.1.2.3 Mining Labour and Employment

Employment in the mining and oil and gas industries collectively represented an estimated 3.2% of the provincial GDP in 2005 (BC Stats 2006b). Employees in these industries totalled approximately 13,800 individuals and earned some of the highest wages across all industries. In 2007, annual salaries and benefits was approximately \$102,000, up from \$99,000 in 2006 and \$93,600 in 2006. Hourly wages averaged \$26 an hour (BC Stats 2006b).

Approximately 41% of industry jobs included miners, drillers, and mining equipment operators and were in the primary industries. One quarter of employment was in trades, transportation, and equipment operation. Including exploration and manufacturing (e.g., refining, smelting, processing) activities, the total number of jobs more than doubles within the mining industry (BC MEMPR 2005).

2.1.3 Forestry and Logging

Despite the industry's decline over the last two decades, the forestry industry remains a major employer throughout northwestern BC. A large number of people are employed in forestry and logging activities holding occupations unique to the primary industry. Other areas of employment range from natural and applied sciences, trades, transportation to business management. In 2005, 21,600 individuals—80% of which were male—had jobs in forestry and logging, with an average wage of \$23.60 per hour, which was 20% higher than the provincial average (BC Stats 2006b).

Wood processing and manufacturing also represents a large percentage of employment in the province, including the production of lumber and wood and paper products. Employment in these areas is mostly found in mills and processing plants.

In addition to industry pressures from export value and commodity prices declining, BC's forestry industry is currently dealing with a mountain pine beetle epidemic, affecting approximately 14.5 million hectares across the province. Accordingly, the allowable cuts for many timber supply areas (TSAs) have been temporarily increased so that the maximum value may be gained from the affected timber. Harvest activity will be cut back after the epidemic to allow forests to recover and regenerate, which is expected to have pronounced implications for the future economy and long-term employment opportunities in the forestry industry (BC MOFR 2008, 2009).

2.1.4 Agriculture

Aside from forestry and mining, other resource-based industries are also significant. Agricultural activity across the province is diverse and well established, including cattle, dairy, and poultry operations and commercial orchards and vineyards. Areas of high agricultural use are largely in the northwestern, northeastern, central, and southern regions of the province.

2.1.5 Fishing

Fishing is a major economic activity in the northwestern region, particularly around Prince Rupert and northern Vancouver Island. Salmon canning has allowed fish harvest marketing to expand beyond the coast. Further advances in harvesting and transportation have also eliminated the need for facilities to be close to fishing grounds, a change that has led to the centralization of the industry in Vancouver, Richmond, and Prince Rupert.

2.1.6 Tourism

BC also has a strong tourism industry, which accounts for approximately 7.1% of employment and 4.5% of provincial GDP (BC Stats 2006b). Tourism activities support service sector industries such as food services, accommodation, transportation, and retail trade, as well as goods sector industries including fishing and hunting. However, tourism-related activities are not evenly distributed throughout the province, and are strongly centred in the Lower Mainland and southern Vancouver Island.

The guide outfitting industry in BC generates about \$116 million of economic activity each year. More than 1,000 guide outfitters and 1,000 guide assistants are directly employed in the industry. More than 5,000 non-resident hunters come to BC each year and spend on average more per day per capita than any other visitor to the province. The guide outfitting industry also contributes approximately \$2 to \$3 million each year to the government in licence and tag fees, surcharges and royalties, and other taxes (GOABC n.d.).

3. Northwestern British Columbia





3. Northwestern British Columbia

3.1 OVERVIEW

Northwestern BC is characteristically remote, with communities that are widely dispersed and isolated from each other. The area in general holds a greater dependence on primary resource industries such as mining, forestry, and fishing, than the rest of the province. Many smaller communities in the area have a predominantly Aboriginal population and the major centres that provide goods and services to the region include Smithers, Terrace, and Prince Rupert.

Mineral exploration and development in the region remains active and there are a number of proposed projects in the area. Forestry is a prevalent industry and as with mining's industry fluctuations, still plays a large role in the region's economy, in particular in the Bulkley-Nechako region.

Outdoor adventure and eco-tourism in the region offers hiking, camping, hunting, fishing, as well as backcountry and heli-skiing. The remote, pristine wilderness is a great draw for the outdoor and nature enthusiasts, along with motorhome travellers bound to and from Alaska along Highway 37.

3.2 **REGIONAL DISTRICT GOVERNMENT JURISDICTIONS**

Regional district offices represent the provincial government while the federal government is involved only with First Nations populations through INAC and Health Canada.

The Schaft Creek socio-economic study area spans two regional jurisdictions: the RDKS and the Stikine Region. The RDKS extends from Terrace and Kitimat in the south to Telegraph Creek and Dease Lake in the north. Dease Lake was included as Electoral Area F for this regional district in 2007; previously, it was part of the Stikine Region.

The regional districts are the primary level of government for unincorporated communities and are responsible for the collective interests of communities within the respective region.

3.3 ECONOMY

Mining (copper, zinc, molybdenum, gold) and forestry (logging, mills) are major economic activities in the Kitimat-Stikine and Stikine regions. Energy (including hydroelectric power) and fishing are also important to the economy of the Kitimat-Stikine region, and pipeline developments are expected. Tourism also contributes to the Stikine region's economy, especially backcountry and eco-tourism (BC Stats 2009e, 2009f).

The mineral potential of the area is rich and varied and the value of mining activities in northwestern BC is recognized as a major economic driver in the region. Sustainable mineral development is supported by local and regional management plans (BC ILMB 2000; BC MSRM 2002, 2004).

Challenges to the resource-rich region are the limited infrastructure, long winters, long distances, and a scattered population. Resource-based communities in this area are also highly susceptible to fluctuations in global commodity markets, and with mines having limited lives, those towns

associated with mines can experience a boom-bust economy, such as in the case of Stewart (and the Granduc and Premier mines), Granisle, and Cassiar (a now non-existent mining town).¹

Transportation infrastructure is another economic strength of the area and includes the container terminal and port facilities in Prince Rupert, and port facilities in Kitimat and Stewart. There is a smelter in Kitimat, along with a liquefied natural gas plant that is in the planning and development stages.

3.3.1 Mining

Mining and exploration in northwestern BC has attracted investors from around the world. The following section highlights projects near the proposed Schaft Creek Project that are either in operation, under construction, or are in the BC environmental assessment (EA) process at the time of writing. Amidst the major projects underway, small-scale operators are also working in many areas, including jade and placer operations, in particular, close to Dease Lake.

3.3.1.1 Recent Mine Closures

Barrick's Eskay Creek, one of the largest silver producers in the world, closed in April 2008. In operations for over 14 years, the mine employed approximately 350 people. Almost one-third of the mine's workforce were members of the Tahltan Nation (Campbell, 2007, pers. comm.; White, 2007, pers. comm.).

3.3.1.2 Proposed Mining Projects

Many projects are in the earlier stages of exploration and development, undergoing the BC EA process. In 2009, projects in the region that were involved in the pre-Application phase of the EA process included the Mt. Klappan Coal project, the Schaft Creek copper-gold-molybdenum-silver project, the Kutcho project, and the Kerr-Sulphurets-Mitchell gold-copper-silver project.

Imperial Metals Corporation's Red Chris porphyry copper-gold project was granted a provincial EA certificate in 2005. However, construction was delayed until a feasible power source could be secured, and the proposed Northwest Transmission Line could offer access to the electrical grid. The Red Chris Project is expected to employ around 250 people during operations.

NovaGold Resources Inc. and Teck Resources Ltd.'s Galore Creek copper-gold project was granted an EA certificate in February 2007 and began construction in June 2007. Construction on the project was suspended in November 2007 because of rising costs. The project subsequently underwent a comprehensive technical and economic review that resulted in modifications to various project components (NovaGold 2009), and if it does proceed, the project will employ an anticipated 500 or more people during operations.

3.3.2 Forestry

In 1998, approximately 2,700 people in northwestern BC were employed in the forest industry. Since then, employment in the area has decreased greatly along with the sector's weakening role in the economy and mills closing and people leaving the area. The costs of upgrading plants and trade

¹ The town of Cassiar was built by the mining company specifically for the purposes of the Cassiar Mine. However, the development of this mine, as well as the town, brought with it a huge boom to the local and regional economy and a significant number of jobs and business contracts were affected by the subsequent closure of the mine and town.

disputes coinciding with global market pressures have caused companies to reduce their non-skilled labour force in an attempt to remain operable and competitive (BC MOFR 2006).

3.3.2.1 Status of the Industry

The northwestern BC forestry industry faces difficult challenges, from high operating costs, fluctuating exchange rates,² low-value timber profile, and the mountain pine beetle epidemic in some sub-regions (more in the southern and eastern parts of the region).

Although the softwood lumber dispute was resolved with a Canada-US trade agreement, the housing construction decline in the US has decreased the demand for lumber. Currently, there is also a surplus of wood fibre caused by the mountain beetle infestation. In the northwestern region specifically, the main challenge faced by the industry is wood quality.

Forestry's economic demise has translated into large-scale job loss and business closures. As such, regional population levels and demographics have changed extensively over the last decade.

Out of the nine sawmills, two operating pulp mills, and remanufacturing plants that were previously in operation, most have closed, including the Terrace-based Skeena Cellulose.³ Skeena Cellulose operated a large sawmill in Terrace, a pulp mill in Prince Rupert, and sawmills in Hazelton, Kitwanga, and Smithers. The Eurocan Mill in Kitimat, employing approximately 500 employees (Vancouver Sun, 2010), closed at the end of January 2010, and the Kitwanga Lumber Company's sawmill, which closed in 2008, was bought by Pacific Bio-Energy. The new owners' plans are to re-open the mill and develop a new pellet plant (Williamson 2009, pers. comm.).

3.3.2.2 Forestry Revitalization Initiatives

To address the state of the industry, government initiatives have been developed to compensate for the region's decline. For example, the provincial government has increased the AAC in the province's affected mountain pine beetle areas by five million cubic metres per annum.

Strategies have been created to provide solutions to the region's problems. One example of such strategies is the 'Northwest Economic Zone,' whose objectives are to provide resources for infrastructure and roads, silviculture projects, and community economic development initiatives to reduce the cost of harvesting. This strategy in particular has brought criticism that such programs would set expectations in other areas of the province and across other industries for 'special treatment.' The governments has therefore not implemented this initiative (Harris 2006). To address the increased rate of unemployment in the industry, the BCFRT was established in 2003 with \$75 million to support unemployed workers and contractors to transition to other employment and a more diversified forest economy. The fund was slated to terminate March 31, 2008, but has effectively rolled over into BCFRT II and recently had total available funds plus distributions of approximately \$134 million (BC MOFR 2005; BCFRT 2010).

² Forestry industry exports were adversely affected by the historically high Canadian dollar in 2008 and 2009, given that a higher dollar translates to higher prices for importers.

³ For more details about Skeena Cellulose, its pulp mill in Prince Rupert and sawmills in Terrace and Hazelton, please refer to the *Forest Resources Associated with the Northwest Transmission Line: Impacts, Values, and Results (Fortech 2008).*

3.3.3 Tourism

The Northern BC tourism region covers over half of BC, but the area is minimally populated and offers a remote and natural wilderness that attracts people locally and internationally. Tourism revenues have become increasingly important to BC's northwestern region's economy (BC Stats 2008g).

International, and in particular, European tourists come to northwestern BC to hunt big game mountain animals such as moose, deer, elk, caribou, wolves, black and grizzly bears, stone sheep, and mountain goats. Licensed guide outfitters take tourists out for trips that are often all-inclusive and typically last one week.

Local and international visitors are also attracted to the many kilometres of trails, picturesque views, scenic day hikes, and overnight backpacking trips in the region's provincial and national parks (WelcomeBC 2007). Many of the parks offer campgrounds and RV parks where visitors can spend the night. Mountain biking and horseback trail riding are also popular activities in many of the parks.

In the winter, the mountains and hills provide alpine and cross-country skiing opportunities. Many of the parks in the region turn their hiking trails into cross-country skiing, snowshoeing, and snowmobiling trails during the winter, allowing for year-round use.

Eco-tourism has been on the rise in northwestern BC over the past decade, all with an outdoor and adventure focus: in 2006, the region boasted 47% of the province's total guide outfitting operations, 30% of the freshwater fishing lodges, and 18% of land-based summer businesses (e.g. cycling tours, ATV experiences, bird-watching, horseback riding) (Tourism BC 2008).

3.4 **REGIONAL INFRASTRUCTURE**

3.4.1 Highways

The highways and locations mentioned in this section are presented in Figure 3.4-1.

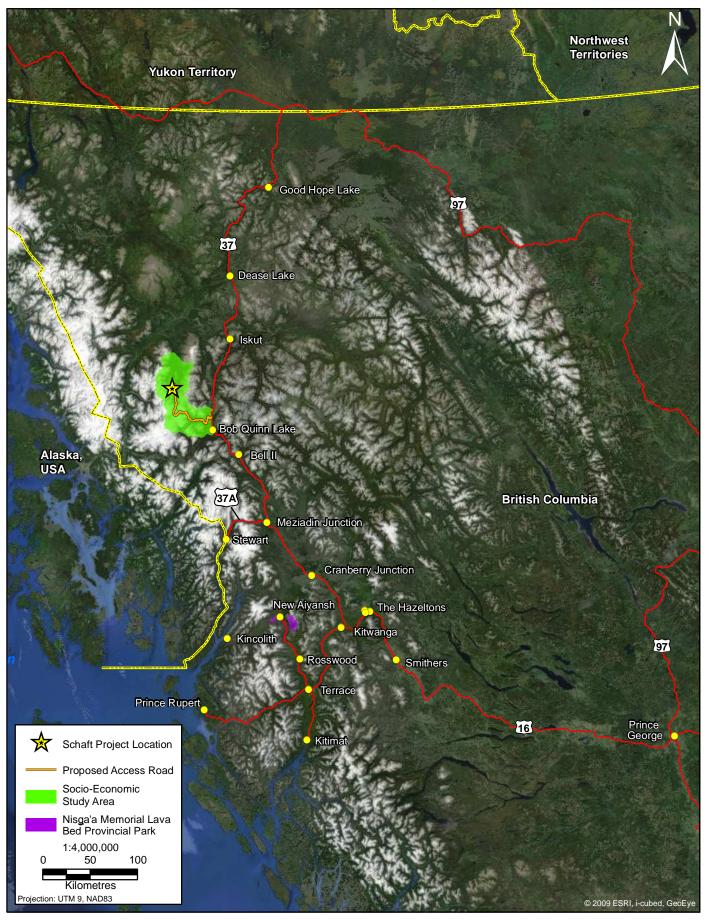
3.4.1.1 Highway 16

Highway 16 (the Yellowhead Highway), a well-paved and maintained route, traverses the region from west to east. Prince Rupert lies on the Pacific coast. From there, Highway 16 continues past Terrace, then Kitwanga (Gitwangak), the Hazeltons (Hazelton, New Hazelton, South Hazelton), Smithers, and Prince George. There are approximately 1,100 to 1,400 vehicles that daily travel along Highway 16 (BC MOTI 2009a). In terms of roadside services, the Kitwanga Junction between Terrace and the Hazeltons offers fuel, basic supplies, and a restaurant.

3.4.1.2 Highway 113 (the Nisga'a Highway)

Highway 113, or the Nisga'a Highway as it is locally termed, is a well-paved road. Commencing at Terrace, the highway continues past Rosswood, through the Nisga'a Memorial Lava Bed Park, onto New Aiyansh, and then to Gingolx. Along the Nisga'a Highway, fuel and basic supplies are available in New Aiyansh; a few bed and breakfasts are also available in the area.

An unpaved forest service road connects Highway 113 with Highway 37 at the Cranberry Junction.





Highways and Towns in the Northwest Region of British Columbia



3.4.1.3 Highway 37/37A

Highway 37 (the Cassiar Highway) runs north to south through northwestern BC. This 724 km highway is popular as one of only two overland routes to Alaska. Highway 37 connects a number of small settlements in this region. The highway originated as a combination of logging and mining roads (Bell 2001). While most of the route is paved or sealed, there are some sections of gravel. Lane markings may not be present and single-lane bridges are common. Highway 37 motorists are cautioned that logging and other large trucks use the road 24 hours a day (BC MOTI 2007).

Highway 37 travels from the Kitwanga Junction (with Highway 16, between Terrace and Smithers) to the Alaska Highway in the Yukon Territory. Along the way it passes through Meziadin Junction, Bell II, Bob Quinn Lake, Iskut, Dease Lake, and Good Hope Lake. At Meziadin Junction, Highway 37A branches westward to Stewart. Another southern branch of Highway 37 also connects Terrace with Kitimat.

Highway 37 traffic volume is approximately 700 to 800 vehicles per day; vehicles were counted just north of Kitwanga (BC MOTI 2009b). Roadside services are scarce along highways 37/37A. Meziadin Junction used to offer fuel, food, and a campground; however, these facilities have been closed for the past few years. Bell II has a lodge, restaurant, and gas bar. Iskut/Tatogga and Dease Lake, approximately two hours north, also provide services.

3.4.2 Air Travel

Table 3.4-1 summarizes the airports within the region and near the Schaft Creek project. Table 3.4-2 summarizes the airports' flight services and scheduled routes.

	Runway	Length	IFR	ΙΑΤΑ
Terrace	Paved	7,500 ft and 5,373 ft	Yes	YXT
Prince Rupert	Paved	6,000 ft	Yes	YPR
Smithers	Paved	7,544 ft	Yes	YYD
Stewart	Paved	3,900 ft	No	ZST
Dease Lake	Paved	6,000 ft	Yes	YDL
lskut (Eddontenajon)	Unpaved	3,600 ft	No	CBU2
Telegraph Creek	Unpaved	5,000 ft	No	YTX
Bob Quinn Lake	Unpaved	4,270 ft	Yes	YBO

Table 3.4-1. Public Airports, Northwestern BC

Source: Air Broker Center (Air Broker Center 2009), NAV Canada (NAV Canada 2009), Suo (2009, pers. comm.) IFR = Indicates whether the airport has an officially published instrument approach procedure. If no, the airport is not suitable for traffic during bad weather or darkness.

IATA = International Air Transport Association (IATA), a 3-letter identifier for the relevant airport.

Table 3.4-2. Flight Services, Northwestern BC

Airline	Routes
Air Canada	Vancouver to Terrace, Smithers, and Prince Rupert
Northern Thunderbird Air	Smithers to Dease Lake; also flag stops at Bob Quinn, Iskut, Kemess, and Sturdee
Coast Mountain Air	Prince George to Terrace and Smithers
Hawk Air	Vancouver to Terrace, Smithers and Prince Rupert; Smithers to Bob Quinn
Northern Thunderbird Air	Smithers to Dease Lake and Smithers to Bob Quinn (subject to weather and airstrip conditions)

3.4.3 Housing

Housing starts (the beginning of construction work on a house) declined by 35.2% in rural centres between 2008 and 2009. The number of houses under construction declined by 9.6% and the number of completed houses increased by 17.2% (CMHC 2010). Because of a tight resale market, more housing starts and an increase in residential construction are anticipated in 2010. Home resales are expected to increase, but at a slower pace than in 2009, and higher prices will lead new listings to rise. The market is expected to be balanced, or favour sellers (CMHC 2009).

3.4.4 Future Infrastructure Developments

Major infrastructure projects in northwestern BC could provide some additional stimulus to the economy over the next five years, including the development of a major 600,000 unit container port at the Port of Prince Rupert; the proposed Enbridge Gateway Pipeline Project linking Strathcona, Alberta and Kitimat, BC; the hydro corridor project to interconnect AltaGas's (formerly Coast Mountain Power Corporation's) Forrest Kerr hydroelectric project to the BC Hydro grid; and the construction of liquid national gas terminals in Kitimat.

3.5 **POPULATION**

In general, the northwestern region of BC has been on a slow decline that has paralleled the forestry sector over the last two decades. The RDKS had a population of 38,450⁴ in 2006, having declined 7% from 2001 (Statistics Canada 2007a; RDKS 2009). The neighbouring Stikine Region had a population of 1,100 in 2006, declining nearly 16% since 2001. Both regions have experienced net population outflows over the past two decades. Men slightly outnumbered women in both regions, likely reflecting the high number of resource industry jobs and other male-dominated occupations (BC Stats 2009e, 2009f).

The RDKS is anticipated to experience a population loss of approximately 1,800 people by 2036, based on net out-migration over the first 15 years, and negative natural increase (accounting for births and deaths) over the second half. The population is also expected to age substantially, resulting in increased dependency of elderly residents on the working population (BC Stats 2009e). The population in the Stikine region is anticipated to grow over the next ten years, but result in a net gain of only 100 people by 2036 (BC Stats 2009f).

⁴ Includes Dease Lake, which was added to the RDKS in December 2006

4. Tahltan Nation





4. Tahltan Nation

4.1 OVERVIEW

The study area for the Project, fall within the southwestern portion of the traditional territory of the Tahltan Nation (Figure 4.1-1). The traditional territory is approximately 94,650 km² and overlaps the Stikine, Nass, and Skeena river watersheds. The Tahltan asserted territory crosses the BC-Yukon provincial border.⁵

Statistical information for this report has been taken from the 2006 Census of Canada (Statistics Canada 2007b) and the Skeena Native Development Society's (SNDS) 2006 Labour Market Census (SNDS 2007a). Detailed information from the 2006 Census of Canada, beyond basic population and dwelling counts about Telegraph Creek is only available for Guhthe Tah reserve (IR 12) which is located in close proximity to Telegraph Creek.

4.1.1 Geographical Location and Description

The Tahltan territory is in northwestern British Columbia. Dease Lake is the farthest north of the three Tahltan communities, and is on Highway 37. It is a regional centre for services. It consists both of an off-reserve community and a Tahltan reserve. Telegraph Creek is 120 km southwest of Dease Lake and 700 km northwest of Terrace. It is adjacent to the Stikine River Canyon. Iskut is on Highway 37, 80 km south of Dease Lake and 500 km north of Terrace.

4.1.2 Culture and Society

Tahltan people have a historically strong connection with and respect for the land and landscape. It is traditionally believed that everything in the world is related and should be treated with respect. The traditional Tahltan idea of wellness is a balance of mental, physical, and spiritual health (School District 87 2000).

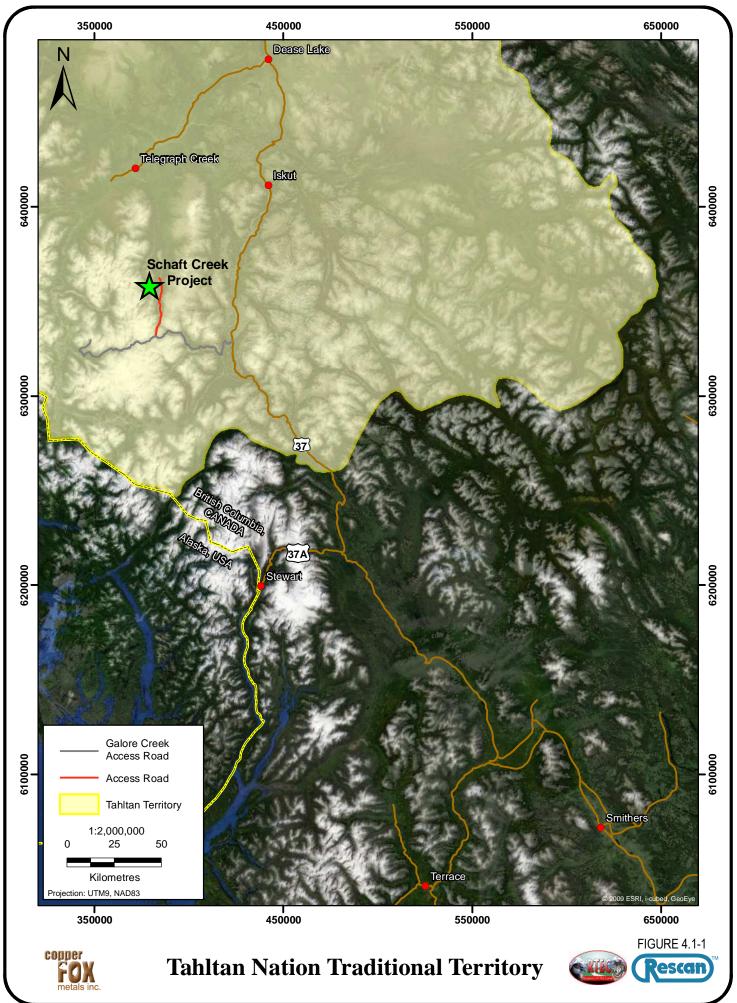
Tahltan people continue to live on the land when possible (School District 87 2000). Further information on Tahltan use and value of the land can be found in the Schaft Creek Land and Resource Use baseline (RTEC 2010).

Extended family groups, or Families, could traditionally use a particular area of land within the Tahltan territory, likely delineated by natural barriers. Each Family group was a steward of that area. Families fall into one of two clans: Wolf or Crow. Membership in Family groups and clans is matrilineal (School District 87 2000).

The Census of Canada reports that the language spoken most often at home in Tahltan communities in 2006 was predominantly English (Statistics Canada 2007b). The Census of Canada also reports that of the Aboriginal identifying population in Iskut, 14% have an Aboriginal language as their mother tongue, 3% speak an Aboriginal language most often at home, and 27% have knowledge of Aboriginal languages. These statistics are not available for Telegraph Creek or Dease Lake (Statistics Canada 2007a).

⁵ Based on information from Tahltan Central Council.

January 19, 2010



4.1.3 Governance

In the past, Tahltan government was organized around the Family group/clan system. Each Family group and the Nanaai (a Wolf clan added later) had a headman and second headman. Decision-making took place during meetings or councils, made up of the headman, second headman, and male elders. Women contributed opinions within individual families; particularly knowledgeable women could participate in the council meetings (School District 87 2000).

In contemporary times, within the Tahltan Nation there are two Bands recognized by Indian and Northern Affairs Canada (INAC): the Tahltan Indian Band (headquartered in the community of Telegraph Creek, and also located in the community of Dease Lake) and the Iskut First Nation (located in the community of Iskut). Each of these Bands has an elected council. As of January 2010, Rick McLean is the Chief of Tahltan Band and Marie Quock is the Chief of Iskut Band. The two Band Councils are elected and administer INAC programs and funding to the communities living on-reserve.

The Tahltan Central Council (TCC) was established in 1975, and links the Tahltan Bands (TCC n.d.). The TCC is registered under the *BC Society Act*, and is headquartered in Dease Lake. The purpose of the TCC is to define and protect Tahltan-inherent Aboriginal rights and title. The TCC's board is made up of one representative from each of the ten Tahltan Families. The executive, elected for two-year terms, is made up of a Chairperson, Vice-Chair, and Secretary-Treasurer. Family representatives are nominated annually by Families and elected at annual general meetings (TCC n.d.). Anita McPhee was elected as Chairperson of the TCC in 2008.

There is no current treaty between the Tahltan Nation and the governments of either Canada or British Columbia. The TCC manages negotiations with federal and provincial governments, as well as industry. Negotiations with government began in 2004 and are outside of the BC Treaty Commission process. The Tahltan have chosen to negotiate through a consultation and accommodation process to prove infringements on Tahltan rights, titles, and interests, and negotiate to limit the impacts and identify the benefits of projects on the Tahltan Nation (TCC n.d.).

Teams have been created under the TCC to address specific areas such as environmental assessment, traditional knowledge and heritage, socio-cultural issues, and lands and resources. The Tahltan Heritage Resources and Environmental Assessment Team (THREAT), which is composed of a number of technical and scientific experts, is concerned with Tahltan participation in EAs of proposed developments in Tahltan territory.

4.2 TAHLTAN NATION STUDY COMMUNITIES

4.2.1 Population and Demographics

Measles and smallpox epidemics led to a population reduction within the Tahltan Nation from 2,000 in the early 1800s to approximately 250 to 300 (School District 87 2000). The total number of Band members in the Tahltan Nation in 2008 was 2,339. This includes 1,668 members of the Tahltan Indian Band, and 671 members of the Iskut First Nation (INAC 2009).

According to the 2006 Census of Canada, the population in Telegraph Creek (IR 6 and 6A, and Guhthe Tah – IR 12) was 251; in Iskut⁶ it was 335; and in Dease Lake it was 66. Between 2001 and 2006 the

⁶ The community of Iskut includes two reserves, Iskut IR 6 and Kluachon Lake IR 1. Although the latter is included in the 2006 Census of Canada, few statistics are available.

population decreased in IR 6 (-2%) and 6A (-20%), and increased in Guhthe Tah (24%), Iskut (18%) and Dease Lake (3%) (Statistics Canada 2007b). Of the 375 people living in the off-reserve community of Dease Lake, 39% identify as Aboriginal and 66% of these people hold Registered Indian status (BC Stats 2009a). Approximately 80% of people from Telegraph Creek and 52% of people from Iskut live off-reserve. However many Tahltan people also reside in larger communities outside of the traditional territory (SNDS 2007a). There are slightly more females than males in the Tahltan Indian Band and slightly more males than females in the Iskut First Nation (INAC 2009).

Of the various Tahltan communities, the 2006 Census of Canada provides age distribution information only for the Guhthe Tah reserve (Telegraph Creek). The median age in Guhthe Tah was 33 in 2006, and 38% of the population was 19 or younger (Statistics Canada 2007b).

4.2.2 Mining Activity in Tahltan Territory

A number of mining projects have been in operation or are proposed for the near future in or adjacent to Tahltan territory. Closed mines include Golden Bear (gold), Snip Mine (gold, silver, zinc, copper, lead), Cassiar Mine (asbestos), and most recently, Barrick's Eskay Creek mine closed in April, 2008. Approximately a third of its 350 employees and contractors were Tahltan (Campbell, 2007, pers. comm.; White, 2007, pers. comm.). Kemess South (copper, gold) is southeast of Tahltan territory and is anticipated to continue its operations until 2010, pending resource reserves (BC MEMPR 2009a).

Proposed mines include Kutcho Creek (copper, zinc, gold, and silver), Kerr-Sulphurets-Mitchell (copper, gold) and Red Chris. Red Chris received its EA Certificate, which was later challenged in court, but reaffirmed by the Supreme Court.

Galore Creek (copper, gold), 65 km south of Telegraph Creek, was granted an EA certificate in February 2007; however, construction was suspended in November 2007. Construction of some components, including the access road, has continued through 2009. Currently, the economic viability of the project is still uncertain and it is unknown whether the project will proceed.

Red Chris (copper, gold), 18 km south of Iskut, obtained its EA certificate in 2005. Howeve,r construction has been delayed until a feasible power source is found. The proposed NTL power line may offer an opportunity to connect the mine to the electrical grid.

The latter two projects are expected to employ approximately 500 and 250, respectively, during operations. It is anticipated that many job positions will be filled by Tahltan members.

4.2.3 Local Economy and Business

In 2006, employment in the communally owned sector was 14% of the employed population of Telegraph Creek and 27% of the employed population of Iskut. Employment in the private sector was 40% and 37%, respectively. There are two communally owned businesses on reserve in Telegraph Creek and four in Iskut. Iskut also has 15 private businesses and 3 artistic enterprises (SNDS 2007a).

The Tahltan Nation Development Corporation is a significant employer in the area and is involved in development projects within Tahltan territory. Mining, construction, hydroelectric power, and forestry are some examples of the sectors in which the company is active. Bear Dog Enterprises is one Family Clan's corporate vehicle for commercial ventures. It is currently involved in aviation, security, catering, and mining (Beardog Trust 2009). Each of these enterprises has been involved in joint ventures with

respect to mining. Other businesses in Telegraph Creek include Arctic Tahltan Contracting, Tsayta Air Floatplane Base, and a general store.

Approximately 10 tourism businesses exist in Iskut including accommodation, retail services, and outfitter services (Stewart-Cassiar Tourism Council 2010). Other businesses in Iskut include a store, and road and vehicle services.

Businesses in Dease Lake (on- and off-reserve) include those relating to tourism such as guide outfitting, dining, groceries, accommodation, entertainment, fuel, transportation, towing services, automotive repair, construction, camp services, banking services, computer service, and environmental services (Dease Lake Internet Society 2006).

4.2.4 Labour Force

In Guhthe Tah, 56% of the population over 15 was in the labour force in 2006. In both Iskut and Dease Lake reserve, this figure was 67% (Statistics Canada 2007b).

4.2.5 Employment Sectors and Income Levels

Of a total labour force population in Telegraph Creek of 148, 64% were employed in 2006; 43% were employed full time, 3% were part time, and 14% were seasonal. Over 90% of employment was in the public and mining sectors. Of a labour force population of 159 in Iskut, 65% were employed in 2006; 46% were employed full time, 6% were part time, and 13% were seasonal. Most of those employed worked in the public and mining sectors (SNDS 2007a).

Occupation and industry categories of the experienced labour force age 15 and older, as reported by the 2006 Census of Canada, are summarized in Tables 4.2-1 and 4.2-2. In Guhthe Tah, the most common occupation category was social science, education, government service, and religion. The most common categories of industry work were resource-based industries and health care.

Table 4.2-1. Occupation Categories in Tahltan Communities (Percentage of the Total
Experienced Labour Force 15 Years and Over)

Occupation Category	Guhthe Tah (%) (Telegraph Creek) (n = 70)	lskut (%) (n = 160)	Dease Lake (%) (n = 30)
Management		6	
Business, finance, and administration		9	33
Natural and applied sciences	14	6	
Social science, education, government service, and religion	29	13	
Art, culture, recreation, and sport		6	
Sales and service	21	25	
Trades, transport, and equipment operation	14	25	33
Primary industry	14	9	
Processing, manufacturing, and utilities		6	

(Statistics Canada 2007b)

Industry Category	Guhthe Tah (Telegraph Creek) (%) (n = 70)	lskut (%) (n = 160)	Dease Lake (%) (n = 30)
Agriculture and other resource-based industries	20	22	33
Construction	14	9	33
Retail trade		6	
Health care and social services	20	9	33
Educational services		13	
Business services	14	9	
Other services	29	22	33

Table 4.2-2. Industry Categories in Tahltan Communities (Percentage of the Total Experienced
Labour Force 15 Years and Over)

(Statistics Canada 2007b)

In Iskut, the most common occupation categories were sales and service, and trades, transport, and equipment operation. The most common category of industry work was resource-based industries. In Dease Lake, occupations included business, finance, and administration and trades, transport, and equipment operation. Industry work included resource-based industries, construction, and health care and social services (Statistics Canada 2007b).

With respect to individual Tahltan communities, income information from the 2006 Census of Canada is only available for Iskut. Median family income in Iskut in 2005 was \$47,957 and median private household income was \$48,512. Both of these were lower than the provincial equivalent. The median income for persons 15 years and over was \$18,528, of which 86% was from earnings and 14% was from government transfers (Statistics Canada 2007b).

In 2006, 85% of the population of Guhthe Tah (Telegraph Creek) who were 15 years or over reported unpaid work such as housework and child or senior care. This figure was 84% in Iskut and 89% in Dease Lake (Statistics Canada 2007b).

4.2.6 Unemployment Levels

The Census of Canada reports that in 2006, unemployment among the labour force over the age of 14 was 20% in Guhthe Tah, 24% in Iskut, and 33% in Dease Lake reserve (Statistics Canada 2007b).

In contrast, the SNDS reported that in 2006, the proportion of the labour force population unemployed and seeking work in Telegraph Creek was 51% and in Iskut was 48%. Most of those unemployed were male. Approximately one quarter of unemployed people in Telegraph Creek were in each of the age brackets of 35 to 44 and 55 to 65. Roughly one third of unemployed people in Iskut were between the ages of 35 and 44, and one quarter between 15 and 24 (SNDS 2007a).

Between 1994 and 2006, unemployment ranged from 44% (2003) to 61% (1999) in Telegraph Creek and 31% (2003) to 61% (1995) in Iskut. In Telegraph Creek, 25% were seeking work and 8% were not. In Iskut, 10% were seeking work and 25% were not. The largest proportion of people seeking work in both communities was under the age of 25. Very few people in either community are deemed unemployable (SNDS 2007a).

Unemployment levels in Telegraph Creek could be a result of a lack of economic planning, dearth of job opportunities, a weak economic base, and availability only of seasonal employment. The availability of only seasonal opportunities; lack of education, training, and skills; and low self-esteem could be factors in unemployment in Iskut (SNDS 2007a).

4.2.7 Education

Tahltan communities fall within School District Number 87 (Stikine), which is headquartered in Dease Lake. The Tahltan School in Telegraph Creek offers kindergarten to Grade 12. Its enrolment as of 30 September 2009 was 42. The Klappan Independent Day School in Iskut offers kindergarten to Grade 9. Its enrolment as of 30 September 2009 was 41. Dease Lake School offers kindergarten to Grade 12. Its enrolment as of 30 September 2009 was 129 (BC Ministry of Education 2009).

Northern Lights College has a campus in Dease Lake that offers continuing education programs in business, business technology, career and college preparation, criminology, heavy equipment operation, land administration, land reclamation, social services work, and university arts and sciences. The campus also provides support to vocational, workforce training, and continuing education courses in Telegraph Creek and Iskut. Facilities on campus include a library, computer and Internet access, a bookstore, and the Building Blocks early childhood development program (Northern Lights College n.d.).

Education levels attained vary between the three Tahltan communities (Table 4.2-1). In Guhthe Tah, 20% of people hold a college, CEGEP (*Collège d'enseignement général et professionnel*, literally translated as "College of General and Vocational Education) or other non-university certificate or diploma, 13% hold an apprenticeship or trades certificate or diploma, and 40% hold no certificate, diploma, or degree. People in Iskut have attained a wide range of educational levels, with 6% holding a university certificate, diploma or degree and 52% holding no certificate, diploma or degree. Most residents of the Dease Lake reserve hold no certificate, diploma, or degree (Statistics Canada 2007b).

	Guhthe Tah								
	(Teleg	raph Cre	ek), (%)	lskut (%)			Dease Lake (%)		
	Total (n=75)	Male (n=30)	Female (n=35)	Total (n=155)	Male (n=80)	Female (n=75)	Total (n=25)	Male (n=10)	Female (n=25)
No certificate, diploma or degree	40	50	57	52	56	40	80	100	80
High school certificate or equivalent	0	67	0	19	13	27	0	0	0
Apprenticeship or trades certificate or diploma	13	33	29	6	13	0	0	0	0
College, CEGEP or other non- university certificate or diploma	20	33	29	13	13	20	0	0	0
University certificate or diploma below the bachelor level	0	0	0	0	0	0	0	0	0
University certificate, diploma or degree	0	0	0	6	0	13	0	0	0

(Statistics Canada 2007b)

Guhthe Tah (Telegraph Creek) residents' fields of study include business, management, and public administration; health, parks, recreation, and fitness; and personal, protective, and transportation services. Iskut residents' fields of study include all of the above fields, plus education; social and

behavioural sciences and law; architecture, engineering, and related technologies; and agriculture, natural resources, and conservation (Statistics Canada 2007b).

The skill levels of those employed in Telegraph Creek in 2006 were mostly vocational and technical, and in Iskut were mostly vocational and labour (SNDS 2007a).

4.2.8 Health and Social Services

All Tahltan communities are within the Northwest Health Service Delivery Area (HSDA) jurisdiction. Northern Health is responsible for the delivery of health care across northern British Columbia (Northern Health 2009). The communities of Telegraph Creek and Iskut fall within LHA 94, the Telegraph Creek LHA, and Dease Lake falls within LHA 87, the Stikine LHA. Health Canada's First Nations, Inuit, and Aboriginal Health program provides health care and contributes funds for health programs and services for on-reserve First Nation communities.

The primary health centre for the region is the Stikine Health Centre in Dease Lake. It offers services such as a pharmacy, laboratory, x-ray, ventilator, and morgue, and receives specialist and mammography visits. Its service capacity is 3,000 to 4,000 persons. Its coverage area extends along Highway 37 from Bell II to the BC-Yukon border. The Tahltan Health and Social Service Authority manages social and mental health programs and services for Tahltan Band members in Telegraph Creek and Dease Lake (PovNet 2008).

Iskut Valley Health Services (IVHS) is responsible for all health and nursing services in Iskut, including social and mental health services, and responds to traffic accidents on Highway 37. IVHS runs a number of programs, all of which integrate education about health and the connection between lifestyle and health. Iskut is the first Band in Canada to have had all health programs transferred to it from Health Canada (Iskut Valley Health Services 2006).

Available information on health status is from the northwestern region of British Columbia, which is a very large area and extends from the BC-Yukon border to south of Bella Coola, and also includes Haida Gwaii (BC Stats 2008b).

In 2006, 20% of census families in Guhthe Tah were female single-parent families (data were unavailable for the other Telegraph Creek communities). In Iskut, 17% of census families were female single-parent families and 11% were male single-parent families. In Dease Lake reserve, 50% of census families were female single-parent families. Average family size in all communities is approximately three people (Statistics Canada 2007b).

Community services in Telegraph Creek include the Tahltan Health and Social Services Authority, which provides National Native Alcohol and Drug Abuse Program services, mental health services, a Ku We Gahan justice program, a women's shelter (PovNet 2008); as well as the Three Sisters Safe Haven Support Line. Community services in Iskut include Head Start parent-child programs.

A number of services exist in Dease Lake, including pregnancy support, speech-language pathology, occupational therapy, special needs, health and mental health, parenting support, parent and child, nutrition, and transportation (Northern Child 2010). The BC Ministry of Children and Family Development has an office in Dease Lake (BC Ministry of Children and Family Development 2007). Youth suicide remains a major concern within the Tahltan communities. The Northwest Inter-Nation Family and Community Service Society provides child welfare services. Telegraph Creek and Iskut are within its service area (NIFCS 2008).

4.2.9 Housing

There are 98 private dwellings in the 3 reserves that make up Telegraph Creek, 101 in Iskut and 21 in Dease Lake reserve. These are primarily single detached houses, with some semi-detached houses. In Iskut, 35% of occupied private dwellings require major repair. In 2006, 30% of private dwellings in Guhthe Tah were constructed before 1986. This figure is 29% for Iskut and nil for Dease Lake (Statistics Canada 2007b).

In Guhthe Tah, 20% of dwellings were recorded to be owned in 2006, and 60% were rented. In Iskut, 24% were recorded to be owned and 53% were rented. In Dease Lake none were recorded to be owned and 67% were rented (Statistics Canada 2007b).

Of the Tahltan reserves, Iskut has the highest population density per square kilometre at 889.⁷ Density in the other reserves ranges from 24 in Telegraph Creek IR 6A to 80 in Telegraph Creek IR 6 (Statistics Canada 2007b).

4.2.10 Infrastructure

4.2.10.1 Communications

Cellular service is unavailable in Tahltan communities. NorthwesTel provides landline telephone service. There is a satellite Earth station in Telegraph Creek. High-capacity digital radio is transmitted to Dease Lake, and low capacity digital radio is transmitted to Iskut. NorthwesTel offers dial-up Internet for Iskut residences, higher-speed Internet for Iskut businesses, and DSL in Dease Lake. The Dease Lake Internet Society also supplies high-speed Internet, and provides Internet training for society members (Dease Lake Internet Society 2006).

4.2.10.2 Emergency and Protection Services

There is a fire alarm emergency centre in Telegraph Creek, a fire hall in Iskut, and a volunteer fire department in Dease Lake.

Tahltan communities are within the BC Ambulance Service's northern region. Dease Lake houses a BC Ambulance Service detachment (British Columbia Ambulance Service 2008).

The Royal Canadian Mounted Police (RCMP) detachment in Dease Lake is responsible for protection services in all Tahltan communities and surrounding areas (RCMP 2010). Of the seven officers in the detachment, two are based in Telegraph Creek as part of a sub-detachment (Telegraph Creek RCMP n.d.).

4.2.10.3 Other

Other facilities in Dease Lake include the Dease Lake Recreation Centre and the Dease Lake Public Library.

The road to Telegraph Creek is graded, but not paved, and connects to Highway 37 at Dease Lake. There is also a gravelled airstrip in Telegraph Creek. Roads in Iskut are gravelled and graded, and there is a gravelled airstrip that is operated by the RDKS. Most roads in Dease Lake are paved, and there is a 6,000-foot paved runway that is operated through the BC Ministry of Transportation and Infrastructure.

 $^{^{7}}$ The density figure is greater than the population of the community due to the small land area – 0.38 km 2

5. Stewart





5. Stewart

5.1 OVERVIEW

Stewart originated as a mining boom town around 1910, shortly after the two prospecting Stewart brothers established themselves there. Gold rush pioneers arrived by ships as there were no roads and only a railway accessing the town site. After a decade of gold prospecting and fur trading, the population declined during the Depression (District of Stewart 2009).

Now, Stewart can be accessed by taking Highway 37A (also known as the Glacier Highway) off the Stewart-Cassiar Highway (Hwy 37). Located at the head of the Portland Canal, the town is adjacent to the US border, across from Alaska's Misty Fjords National Park. Stewart has become a tourist destination for its pristine wilderness and history as a once thriving mining boom town. Stewart appeals to the natural resources industry because of its ice-free, deep-sea port.

5.2 GOVERNANCE

The District of Stewart governs Stewart. The current mayor is Angela Brand Danuser and there are six councillors. Each councillor is responsible for specific portfolios such as: emergency planning, health, youth services, economic development, parks, port development, tourism and heritage, and emergency services. In addition, the District's planning areas are organized into five different committees including: planning/policy, budget/finance, bylaw, communications, and community development (District of Stewart 2009).

5.3 ECONOMY

Primarily a resource-based community, Stewart's economy has historically been driven by the forest and mining industries and has long been an export centre for raw logs and mineral concentrates. Numerous proposed projects in northwestern BC view Stewart as a future port for distribution of products to be shipped to international markets.

The town experiences large economic fluctuations between the seasons, with many hotels, eateries, and small businesses shutting down for the winter.

5.3.1 Mining

Stewart's history is based in mining. During the 1920s the Premier Mine held the distinction of being the largest gold mine in North America. It closed in 1952. In 1969, the Granduc Mine opened and the local population increased to approximately 1,500 people (District of Stewart 2009).

Almost a decade later, Granduc closed because of low copper prices. Soon after Canada Wide Mines bought the mine there was another boom. Operations also started on the Silback-Premier property, run by Westmin Mines. The mine, subsequently under a joint venture, continued operations until spring of 1996, when the mine's reserves and price of gold declined (District of Stewart 2009).

The mining industry's contribution to Stewart's economy has declined substantially over the last two decades. Currently, only 8% of the local income is generated by mining-related work, whereas this rate

constituted 43% of local income in 1991. Forestry has seen a similar trend and only contributed to 4% of local income 2006 (Horne 2009).

Mining exploration activity in the area and related activities has provided Stewart indirect economic benefits. Activities produce opportunities for a wide range of local contractors and businesses to provide services to the mining sector. For instance, local businesses have provided diamond drilling services, expediting services, and heavy machinery equipment rentals (Brand Danuser, 2009, *pers. comm.*).

Local residents have been employed in the mining sector, in particular for the Eskay Creek and Huckleberry mines; either at the mines or driving trucks (Drew, 2009, *pers. comm.*). When the Eskay mine was operating, it employed an estimated 20 Stewart residents; (Brand-Danuser, 2009, pers. comm.). An increase in mining-related activities increases traffic and presence of a wide range of workers and people from the government or business sectors in Stewart during the summer months, which positively affects local service providers such as restaurants and hotels.

5.3.2 Public Sector

In 2006, 52% of local employment income for local residents was derived from the public sector, particularly related to education, the municipality, and regional government agencies. There is a Service BC branch in Stewart. The branch provides a centralized government agency service and processes bill payments, drivers licences, and other administrative and regulatory activities such as fishing, hunting, and mining licences (Horne 2009).

5.3.3 Truck Transportation

The regional activities' need for transportation services translates into numerous truck driving jobs that are filled by local Stewart residents. Local trucking companies are involved in transporting ore, concentrate, and/or logs from mills, including Arrow Trucking and All West Trading.

5.3.4 Port

The saltwater port in Stewart supports a barge terminal and bulk commodity loader. The Portland Canal is approximately 137 km from the Pacific Ocean and offers excellent ship access (District of Stewart 2009).

The Stewart Bulk Terminals at the port came out of pre-existing facilities that were in place to transport ore from the former Granduc mine. The terminals have the capacity to service large international freighters and have been the shipping end point for regional mines until recently. Since the closure of Huckleberry and production decline at Eskay, only a few jobs exist at the terminals (Brand-Danuser, 2009, pers. comm.).

5.3.5 Tourism

Stewart has glaciers nearby and is surrounded by lakes and streams, making it a popular tourist destination, specifically during the summer months.

Because of weather and road conditions, most tourist activity occurs during the summer months. Between seasons, many hotels, restaurants, and small businesses close during the winter. As such, the town's economy fluctuates greatly between seasons. In addition to the scenic views, wildlife watching, and ocean fishing, visitors are drawn to the town of Hyder, on the Alaskan side of the border.

Stewart's former identity as a gold-rush and mining hub can be experienced by tourists and appreciated by history enthusiasts in its museum and throughout the town's historical buildings and monuments.

5.3.6 Goods and Services

Although Stewart has numerous services and facilities for a town its size, many of these are only open in the summer season. A number of services have been lost in the past couple of years, including the bank, hardware store, pharmacy, and the downgrading of the hospital to a health centre (McFee, 2009, pers. comm.).

The following is a complete list of goods and services available as outlined on the District of Stewart's website:

Accommodations	Education	Hair Dressing	Restaurants
Automotive	Electrical Contracting	• ILWU	Road Maintenance
 Barge/Bulk Loading 	Emergency Services	Insurance	RV Parks
 Bus Lines (Passenger and Freight) 	Equipment Rentals	Internet Services	Security Services
Cabaret/Lounge	Expediting	Library	Snow Removal
 Campgrounds 	 Fishing Charters 	Liquor Vendors	Transportation
Car Wash	 Fishing/Hunting Licences 	Logging Contractors	Tourist Information
Contractors	Fuel Supplies	Office Rentals	• Tow Truck
Courier/Freight	 Gifts/Souvenirs and Retail 	Postal Services	 Video/Movie/Game Rentals
Customs	Gravel and Rock	Propane Dealers	Weather Station
Drywall Contracting	Groceries	 Rentals (House/ Warehouse) 	Welding Services

(District of Stewart 2009)

5.4 **POPULATION AND DEMOGRAPHICS**

The 2009 population estimate for Stewart was 444 (BC Stats 2009d). During the 2006 census, Stewart had a population of 496 people (Statistics Canada 2007b), and in 1996 the population was 894 (BC Stats 2006a).

Demographically, the number of males has decreased in the community of Stewart since the mine closures. In 2006, the male population had a 43.5 year median age, which was slightly higher than the province's male median age of 40. Stewart's female population had a 41.2-year median age, just slightly less than the provincial median of 41.5. In general, the population aged significantly between 2001 and 2006, with the majority of the population between 45 and 64 years (Statistics Canada 2007b). Table 5.4-1 summarizes the age and gender distribution of Stewart between 2001 and 2006.

Eleven percent of the population in Stewart self-identified as Aboriginal in 2006 (Statistics Canada 2007b).

		Stev	ВС			
	2	2001		006	20	06
Age Group	Male	Female	Male	Female	Male	Female
Age 0–14	20.6%	18.0%	20.0%	19.6%	17.3%	15.8%
Age 15–24	14.7%	14.8%	6.0%	5.9%	13.6%	12.6%
Age 25–44	27.9%	34.4%	26.0%	23.5%	27.1%	27.6%
Age 45–64	27.9%	29.5%	36.0%	37.3%	28.5%	28.4%
Age 65 and over	8.8%	3.3%	12.0%	13.7%	13.5%	15.6%
Total	345	315	245	250	2,013,990	2,099,495
% Total Change	-	-	-29%	-20.6%	-	-
% Gender	52.3%	47.7%	49.5%	50.5%	49.0%	51.0%
Median Age	36.9	35.0	43.5	41.2	40.0	41.5
Total (Male + Female)	e	660 495		495 4,113,		3,485

Note: To ensure percentages summed to 100%, totals were adjusted minimally when calculating percentages to account for anomalies in the Statistics Canada data. Absolute data for individual categories used to calculate percentages and for the totals presented above have not been adjusted, and may contain irregularities derived from the original source. Source: (Statistics Canada 2002, 2007b).

5.5 SKILLS BASE AND EDUCATION LEVELS

5.5.1 Education Level Attainment

In 2006, 24% of Stewart's population over 15 had not completed high school. In comparison to the province, Stewart has proportionately more residents with no formal education or a high school certificate, or a trade certificate and fewer residents with college or university credentials. Thirty-three percent of the population had a high school certificate, 12% had a trade certificate, 9% had a college certificate, and 22% had some kind of university qualification (Statistics Canada 2007b). Table 5.5-1 details Stewart's collective education levels.

Table 5.5-1. Maximum Level of Education Attainment as a Percent of Total Population:Stewart 2006

		Stewart		BC			
Highest Level of Schooling	Total	Male	Female	Total	Male	Female	
Total population aged 15+	385	190	195	3,394,910	1,649,590	1,745,320	
No high school certificate or diploma	23.7%	23.7%	27.0%	19.9%	20.3%	19.5%	
High school or postsecondary certificate	32.9%	42.1%	21.6%	27.9%	26.5%	29.2%	
Trades certificate or diploma	11.8%	13.2%	8.1%	10.9%	14.6%	7.3%	
College certificate or diploma	9.2%	5.3%	13.5%	16.7%	14.4%	18.8%	
University certificate, below a bachelor	11.8%	5.3%	18.9%	5.4%	4.6%	6.2%	
University certificate, diploma or degree	10.5%	10.5%	10.8%	19.3%	19.6%	19%	

(continued)

		Stewart			BC	
Highest Level of Schooling	Total	Male	Female	Total	Male	Female
Total population aged 15–24	30	20	15	538,010	275,720	262,290
No high school certificate or diploma	60%	0%	50 %	37.3%	39%	35.6%
High school or postsecondary certificate	40%	100%	50%	41.3%	41.7%	40.8%
Trades certificate or diploma	0%	0%	0%	3.9%	4.5%	3.1%
College certificate or diploma	0%	0%	0%	8.1%	7.3%	9%
University certificate, below a bachelor	0%	0%	0%	3%	2.6%	3.4%
University certificate, diploma or degree	0%	0%	0%	6.4%	4.9%	8.0%
Total population aged 25–34	45	20	25	497,715	240,980	256,735
No high school certificate or diploma	37.5%	0%	60%	9.4%	11%	7.9%
High school or postsecondary certificate	37.5%	50%	0%	26.2%	29%	23.5%
Trades certificate or diploma	0%	0%	0%	9.3%	11.8%	6.9%
College certificate or diploma	0%	0%	40%	20%	17.3%	22.5%
University certificate, below a bachelor	25%	50%	0%	6.2%	5.5%	6.8%
University certificate, diploma or degree	0%	0%	0%	29%	25.4%	32.4%
Total population aged 35–64	240	120	120	1,786,750	868,970	917,780
No high school certificate or diploma	25%	33.3%	21.7%	13.2%	14.0%	12.4%
High school or postsecondary certificate	25%	33.3%	17.4%	25.8%	23.5%	28%
Trades certificate or diploma	16.7%	19%	17.4%	12.7%	17.1%	8.6%
College certificate or diploma	12.5%	0%	17.4%	19.5%	16.7%	22.1%
University certificate, below a bachelor	4.2%	0%	8.7%	6.1%	5.1%	7%
University certificate, diploma or degree	16.7%	14.3%	17.4%	22.8%	23.7%	21.9%

Table 5.5-1. Maximum Level of Education Attainment as a Percent of Total Population:Stewart 2006 (completed)

Note: To ensure percentages summed to 100%, totals were adjusted minimally when calculating percentages to account for anomalies in the Statistics Canada data. Absolute data for individual categories used to calculate percentages and for the totals presented above have not been adjusted, and may contain irregularities derived from the original source. Source: (Statistics Canada 2007b).

5.5.2 Education and Training Services

The Bear Valley School has Kindergarten through to Grade 12 education. The North Coast Christian School was also an elementary school service provider in Stewart, but it closed in 2003 because of low enrolment (Drew, 2009, pers. comm.).

Operating on a four-day week, the Bear Valley School is staffed with seven teachers, including the principal. Course variety is limited because of the small population, and many electives available at other schools are not available in Stewart. The North Coast Distance Education School (NCDES) offers distance adult education classes as well as some options for students wishing to pursue independent study programs (NCDES 2009).

The school has two libraries. One is for the elementary students and the other is for the high school students and general public. There is a gymnasium, general assembly hall, as well as specialized classrooms for home economics, wood and metal-working, and science labs (Drew, 2009, pers. comm.).

Northwest Community College (NWCC) offers post-secondary education through its local community campus in Stewart such as college preparation or upgrading courses and specific vocational courses.

Once local students graduate from the high school, they typically go on to university outside of Stewart. Most of the students at the local NWCC branch are adults (Drew, 2009, pers. comm.).

Residents can also participate in distance education through audio-teleconferencing and online courses. Those residents looking for work can get general job search assistance through NWCC as they are in partnership with Human Resources Development Canada. General continuing education and community-interest courses are also available (NWCC 2009a).

5.6 EMPLOYMENT AND INCOME

5.6.1 Employment and Participation

During the latest Census in 2006, Stewart had a 79% labour force participation rate. Out of the 385 people aged 15 and older that made up Stewart's potential labour force, 305 people were actually in the labour force (employed or unemployed and seeking work). This level of economic participation is significantly higher than the 66% average for the province (BC Stats 2009b). Table 5.6-1 illustrates Stewart's labour force and participation rates from 2001 and 2006 in comparison to the provincial average.

Table 5.6-1. Labour Force Data, Stewart 2001 and 2006

	Stewart, 2001			St	ewart, 2	006	BC, 2006		
Labour Force	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total Population 15+	-	-	-	385	190	195	3,394,910	1,649,590	1,745,320
Participation Rate	74.5%	77.8%	71.2%	79.2%	92.1%	66.7%	65.6%	70.7%	60.7%
Unemployment Rate	24.1%	31%	18.9%	8.2%	11.4%	0%	6.0%	5.8%	6.3%

Source: (Statistics Canada 2002, 2007b).

The unemployment rate was at 11.4% in 2006 (i.e., approximately 25 people), which is an improvement from 2001, when it was at 24.1%. Stewart's unemployment rate for 2006 was higher than the provincial rate of 6% (Statistics Canada 2007b).

Approximately half of the local employment is derived from industry-related occupations. The breakdown of these positions include: transportation equipment operators (10%); trades helpers, construction, and transportation labourers (10%); occupations unique to forestry, mining, oil and gas, and fishing (10%); heavy equipment, crane operators, and drillers (8%); mechanics (5%); construction trades (3%); and primary production labourers (3%) (BC Stats 2009c).

5.6.2 Income and Earnings

The median level of earnings for Stewart's population over 15 was \$26,233 in 2005. Males earned an average of \$41,780, approximately \$10,000 more than the provincial male average. Females averaged \$19,521, which was almost on par with the provincial average. Table 5.6-2 outlines population earnings for Stewart in comparison to BC in 2005.

5.6.2.1 Income Composition

Income in Stewart was generated mostly from employment (81.3%). However, government transfers accounted for 11% of aggregate community income while 7.8% came from other sources.

		Stewart			BC	
	Total	Male	Female	Total	Male	Female
Annual median earnings	\$26,223	\$41,780	\$19,521	\$25,722	\$32,375	\$20,458
Annual full-time median earnings	\$38,190	\$60,556	\$34,125	\$42,230	\$48,070	\$36,739
Median income after tax	\$26,279	\$33,219	\$23,088	\$22,785	\$28,251	\$18,930
Earning as a % of total income	81.3%	92%	67.30%	75.1%	78.5%	69.8%
Government transfers as a % of total income	11%	6.6%	17.4%	10.7%	7.9%	15.0%
Other money as a % of total income	7.8%	3.8%	13.4%	14.2%	13.6%	15.2%

Table 5.6-2. Earnings and Income for the Stewart Population Over 15 Years: 2005

Source: (Statistics Canada 2007b).

5.7 SOCIAL AND HEALTH ISSUES AND SERVICES

5.7.1 Social and Health Issues

The most frequent users of the local health centre's emergency ward range in age between 40 to 70 years. Although women and children are frequent visitors to the clinic, children represent a relatively minor percentage of users. Health problems associated with an ageing population are reflected in the user group demographic including heart attacks, angina, and chronic illnesses (Farrell 2007, pers. comm.).

In the summer, motor vehicle accidents become more common with the increase in tourist traffic and translated into broken bones, sprains, lacerations, and respiratory problems. In addition, alcohol-related accidents and injuries are common during this time (Farrell 2007, pers. comm.).

As with any community, Stewart has its share of drug and alcohol abuse issues. However, some may attribute these issues to the area's isolation and lack of recreation and entertainment options (E. Drew 2007, pers. comm.). While alcohol is predominant, drugs such as marijuana, cocaine, and crystal methamphetamines are also prevalent (Farrell 2007, pers. comm.).

The 2008 crime rates (number of offences per 1,000 population) in Stewart were 14.7 for violent crimes, 38 for property crimes, 55 for other criminal code offences, 65.1 for drug crimes, 6.3 for assault, and zero for motor vehicle theft (Police Services Division 2009).

5.7.2 Social and Health Services

5.7.2.1 Health Centre

The Stewart Health Centre is managed by the Terrace-based Northern Health Authority (NHA), and has recently become accredited under this body. The clinic currently staffs two doctors and two registered nurses, one of which is on call overnight for emergencies (Farrell 2007, pers. comm.).

The health centre provides clinic, emergency, and trauma services for out-patients in addition to laboratory and X-ray services. There is no longer a pharmacy at the centre; pharmaceutical technical assistance and prescriptions are ordered from Terrace as required. The facility does not offer overnight services, except when needed (e.g., if the road is closed). In previous years, when there was a higher population and activity in Stewart, the health centre offered full hospital services. Although the facility still has the infrastructure to operate at a higher capacity with more service, there is not enough demand or staff to do so. Patients requiring care beyond the ability of the centre are transferred to

other city centres such as Terrace or Prince George, depending on the nature of the case and the availability of beds (Farrell 2007, pers. comm.).

Preventive health programs are currently lacking in the community, although information is often available through the clinic. However, with increased funding, the community could benefit from more proactive campaigns and support in this area (Farrell 2007, pers. comm.).

5.7.2.2 Social Services

The government agents at Service BC provide social services to the community but they are limited to general community health and awareness programs offered by the Stewart Health Centre, RCMP, and other groups (Holland 2007, pers. comm.).

There are no services for children and families within the community such as safe houses and protective services that existed when there was a bigger population (Farrell 2007, pers. comm.; Holland 2007, pers. comm.).

5.7.2.3 Protection Services

The RCMP and fire department's service jurisdiction cover approximately 44,000 square kilometres. This includes the extent of Highway 37A, and Highway 37 from Cranberry Junction to Bell II. Stewart's RCMP detachment employs three officers.

A BC Ambulance, based locally, serves Highway 37A and Highway 37 from Cranberry Junction to Bell II, including the camps at Bob Quinn and Eskay Creek and across the US border in Hyder. The majority of calls are for patient transfers from Stewart to larger hospitals (Ellwood 2007, pers. comm.).

The Fire Department has 19 volunteers. Emergency calls and volunteer deployment is coordinated through the Stewart Health Centre as the fire department is not staffed on a full-time basis (Ginka 2007, pers. comm.). Road accidents, often involving tourists, account for the majority of the fire department's activities; a total of 18 road rescues were reported last year (Ginka 2007, pers. comm.).

The District of Stewart is currently in the process of adopting a 911 system for emergency calls, through the RDKS. This is mainly to accommodate tourists, who are usually unfamiliar with the local emergency services numbers (Ginka 2007, pers. comm.).

5.7.2.4 Recreational Services

Stewart has numerous recreational opportunities in the area. The Al Lawrence arena and ice rink is managed by the Stewart Winter Club and is used for adult and youth hockey leagues. Other community groups use the area for recreational and social programming, including social functions in the hall (Stewart and Hyder ICC n.d.).

The Bordertown Bombers snowmobile club has many members as snowmobiling is a popular pursuit in Stewart and the surrounding area. Stewart is also used as a base for backcountry- and heli-skiing, which are popular in the region.

The youth centre offers sports and arts programs and may organize weekend ski and golf trips to Smithers. The District is trying to reopen the local swimming pool, which used to be heavily funded by mining companies, but it recently had to close (Drew, 2009; Ellwood, 2007; Ginka, 2007, pers. comm.).

Other facilities include the community library, which is shared with the school, and the Stewart Museum (Stewart and Hyder ICC n.d.).

5.8 INFRASTRUCTURE

5.8.1 Housing and Property Value

Stewart recorded a total of 307 private dwellings in 2006. Out of these, only 224 were reported to be occupied. Two-thirds were constructed before 1970. Single-detached family homes made up almost 87% of the housing stock, while apartments made up the remainder of housing (BC Stats 2009b).

The average housing market value in Stewart was approximately \$57,448 in 2006 (Statistics Canada 2007b). Property prices have decreased greatly over recent years (Drew 2007, pers. comm.) Monthly mortgage payments for homeowners averaged a reported \$312, while average monthly rent was \$466 (Statistics Canada 2007b).

5.8.2 Utilities

The District of Stewart is responsible for municipal services including: roads, water, wastewater, and solid waste (Holland 2007, pers. comm.). Residents receive treated water from the community well-water system. Wastewater is treated to secondary standards with a local sewage lagoon system, which has the capacity for up to 6,000 residents (Stewart and Hyder ICC n.d.).

5.8.3 Communications

Telecommunications services, including telephone, Internet, and cellular service are provided by Telus and Telus Mobility. A few secondary long distance providers offer long distance services and there are four independent Internet service providers in the community, providing high speed and wireless services through the school and various locations in the community.

The local area has access to three radio stations (CBC, CKEW, and CFFW) along with direct satellite and cable television services, which are available from Smithers. Television service is available through CityWest Cable, based out of Prince Rupert, along with access to StarChoice of ExpressVu satellite services. The Border Times is the local Stewart-Hyder newspaper while the Terrace Standard is also available (Holland, 2007, pers. comm.).

5.8.4 Transportation and Access

The Stewart-Cassiar Highway (Highway 37) is also referred to the Stewart-Cassiar connector as it connects Stewart and the entire Cassiar district to the rest of the province. From the Meziadin Junction on Highway 37, Stewart is 62 km west along Highway 37A, which was built in the 1950s. The Nass River Bridge was built in 1972 (District of Stewart 2009; British Columbia.com 2010)

In the summer, there are regular ferry sailings between Stewart and Ketchikan, Alaska, run by the Alaskan State Ferries. From Ketchikan, the ferries continue north to Skagway and/or south to Prince Rupert. From there, BC Ferries continue south to Vancouver Island and the mainland (British Columbia.com 2010).

6. Terrace





6. Terrace

6.1 OVERVIEW

Approximately 550 air miles northwest of Vancouver off Highway 16, Terrace sits on the Skeena River within the broad Skeena River Valley of the Coast Mountains. It is the regional business centre for the area. In addition to the town's wide range of shopping centres, restaurants, entertainment, and sporting events, the surrounding landscape offers an abundance of outdoor activities for residents and visitors.

Terrace is strategically situated at the geographic centre of northwestwrn BC, and is the hub for road, rail, and air transportation routes. Terrace and its many businesses, retailers, medical, and government agencies serve residents of Terrace, Kitimat, Prince Rupert, Stewart, and the surrounding First Nations communities (City of Terrace 2009).

6.2 GOVERNANCE AND COMMUNITY PLANNING

6.2.1 City of Terrace

Terrace's town council is led by its mayor, David Pernarowski, and six councillors. Each council member is responsible for a portfolio ranging from inter-governmental affairs to housing to environmental sustainability. Council meetings are held twice a month and any resident may address the council at these meetings, whether or not their topic of concern is on the agenda (City of Terrace 2009).

Governed by its council, the City of Terrace has a Chief Administrative Officer that oversees the numerous departments and overall operations of the City's programs and services (City of Terrace 2009).

6.2.2 Regional District of Kitimat-Stikine

Terrace is within the RDKS. The RDKS administers approximately 40 services that range from land use planning, water systems, fire protection, library services, to the public marina. The RDKS has approximately 20 employees based in Terrace and Kitimat.

RDKS departments include:

- Planning and Development Services Department
- Works and Services Department
- Kitimat-Stikine Regional Hospital District
- Economic Development Commission
- Zero Waste Program

RDKS service areas include:

• General government services

- Protection services
- Transportation services (including streets, lighting, etc.)
- Environmental health
- Cultural programs
- Environmental Development Services
- Recreation Services
- o Utilities
- Other special interest projects

(RDKS 2009)

6.2.3 Community Planning

Terrace's Official Community Plan (OCP) outlines objectives that aim to develop the local economic through economic diversification. These objectives include

- Recognizing the regional role the City performs in providing transportation, goods, and services—particularly as a regional shopping, transportation, and tourism centre for northwestern BC
- Recognizing the existing industry as vital to the future growth and development of the City and the fostering of continued development of environmentally safe industry to ensure the economic health of the City and its residents.
- Developing Terrace as a major regional aviation centre and associated economic development centre, in a manner that befits the city and the northwestern BC region.
- Recognizing that tourism has economic potential and can help Terrace diversify its economy and foster an environment whereby tourism can grow and flourish.

(City of Terrace 2002)

6.3 ECONOMY

Terrace is well positioned to leverage opportunities generated from the proposed natural resource project developments in the region. The historically important forest industry has positioned Terrace with the potential to provide workers, supplies, services, and expediting. The already existing infrastructure, including railway, industrial zoning, and fuel storage capacity is of fundamental value to, and factored into numerous proposed project plans (Webber, 2009, *pers. comm.*; Zurkirchen, 2007, *pers. comm.*).

Since the forestry industry's downturn over the past decade, Terrace has focused on revitalizing the economy through diversification. The market value of industrial and private land is affordable and is seen to be an attractant to the area for the resource and business sector. Numerous initiatives are in place to support economic growth through training and support services. An example of such a program is Community Futures Development Corporation (CFDC), a government-funded organization that provides support services to entrepreneurs and small business (CFDC 2008).

6.3.1 Local Economic Development and Business

6.3.1.1 Terrace Economic Development Authority

The Terrace Economic Development Authority (TEDA) is a public-private partnership organization dedicated to revitalizing Terrace's local economy. TEDA therefore markets local businesses and investment opportunities. TEDA also provides business advice and has developed a comprehensive database of all businesses and contractors in the area (TEDA 2006; Zurkirchen, 2007, pers. comm.).

6.3.1.2 Local Businesses

There are a range of businesses operating in Terrace, including a variety of retail stores and boutiques, gas stations, restaurants, health services, and wholesale trade. The community has a shopping mall, grocery stores, and department stores (including Wal-Mart and Zellers). Banking services include national banks and local credit unions. Invest BC identifies a number of other support service businesses, including: a tool and die shop, 5 machine shops, 10 welding shops, 3 office equipment firms, a temporary employment agency, an import/export broker, 6 international courier companies, and 4 freight forwarders (Invest BC 2009).

6.3.2 Forestry

When Skeena Cellulose Inc. closed in 2000, hundreds of residents lost their jobs and the community felt the economic impact as the rest of the forestry sector was already in decline (Horne 2009). The mill reopened and production started up again in 2005 when it was bought by Terrace Lumber Co. After providing temporary employment and economic benefit, it closed again a few years later. The Terrace Precut Mill also closed in 2007, while the Skeena Sawmill is still operating with 15 employees, down from a high of 120 (Webber, 2009, pers. comm.).

In an effort to increase harvesting and milling in the Terrace area for long-term employment and economic development, Terrace was granted a five-year community forest agreement by the BC Ministry of Forests in 2006. The agreement permits harvesting to a limit of 30,000 cubic metres of timber per year within public forest lands in the Kalum TSA. The agreement may be extended for 25 more years (Government of BC 2007).

6.3.3 Tourism

Tourism in the Terrace area has been increasing since the late 1990s. This runs parallel to an overall focus on economic diversification in the area, which has been marketed as a hub for outdoor enthusiasts. In 2004, there were 99,062 visitors to the area documented; over 10,000 more than just five years previously, when there were 86,218 people that visited the area. Because of the variety of sports, activities and events that take place throughout the year in Terrace, there is a fairly constant level of visitors throughout the year with little fluctuation between seasons.

Terrace has 14 hotels and motels, totalling 481 rooms, not including bed-and-breakfasts and lodges. There are three licensed bed-and-breakfasts within Terrace city limits (Williamson 2009, *pers. comm.*) and approximately six lodges within the Terrace area with a collective estimated 50 rooms (Houlden 2009, *pers. comm.*).

6.3.4 Mining

As a regional service and transportation centre, Terrace both supports and is supported by the mining activity in the area. In 2007, Terrace was reported to have generated an estimated \$2.9 million in

service industry expenditures through indirect economic effects from mineral exploration in northwestern BC (BC MEMPR 2008).

6.4 **POPULATION AND DEMOGRAPHICS**

6.4.1 Population

Terrace's population was 11,320 according to the 2006 national census. This is down by 6.5% from when the population was 12,109 in 2001 (Statistics Canada 2007b). In 1997, the population was at its highest at 13,417. Since the late 1990s, Terrace's population has been declining in tandem with the forestry sector's demise. After Prince Rupert, which has a population of 12,815, it is one of the largest urban centres in northwestern BC.

6.4.2 Demographics

In 2006, Terrace's population had a median age of 37 years. This is younger than the provincial age median of 41 years. Twenty-two percent of the community is under the age of 15 (Statistics Canada 2007b).

Terrace is within the traditional territory of the Tsimshian First Nations and is near numerous reserves. This is reflected in the representation of Aboriginal people in the area, which is approximately 21% of the city's population. Tsimshian member nations in the area include the Kitsumkalum, Kitselas, Lax Kw'alaams, and Metlakatla. Non-Tsimshian Aboriginal groups also residing in Terrace include the Nisga'a, Gitxsan, Gitanyow, and Tahltan, among others (SNDS 2007a).

6.5 SKILLS BASE AND EDUCATION LEVELS

6.5.1 Education Level Attainment

Trades and vocational college diplomas are the predominant educational level for Terrace residents aged 25 to 64 years. In comparison to the rest of the province, local residents are less likely to have completed high school or have university degrees (BC Stats 2009d). In 2008, only 54% of high school students graduated, ranking Terrace as one of the lowest graduation rate in BC (BC Stats 2008f). Of those residents that did acquire post-secondary education, academic backgrounds of the population include:

- o 23% business and public administration
- o 22% architecture, engineering, or related trades
- o 17% health, parks, recreation, and fitness
- o 13% education

(BC Stats 2009c).

6.5.2 Educational Jurisdiction and Services

6.5.2.1 Coast Mountains School District

Coast Mountains School District (CMSD) No. 82 is responsible for administering and governing schools in Terrace, along with Hazelton and Kitimat. There are a total 14 schools in Terrace, including elementary and secondary. The First Nations Education Centre provides culturally relevant support

services to all the schools in Terrace, the District's Special Services and the North Coast Distance Education School provide support to those with alternative learning requirements (CMSD 2009).

6.5.2.2 Northwest Community College and University of Northern BC

NWCC offers vocational, trade, and technical programs. Headquartered in Terrace, NWCC has nine campuses in various communities throughout northwestern BC.

Regular ongoing NWCC programs include:

- Special Education Assistant training
- Workplace Skills Training
- Career and College Preparation
- Continuing Education
- University Transfer Credits
- Practical Nursing Skills
- Bachelor of Science in Nursing

(NWCC 2009a)

Table 6.5-1 summarizes the number of students enrolled across NWCC's departments.

Program Distribution for 2008/09	Students Enrolled (FTE)	Percent
Developmental Education	642.0	37.7
Applied Sciences	28.5	1.7
Commerce/Administration	110.0	6.5
University Credit	192.0	11.3
Health Sciences	103.5	6.1
Trades	558.5	32.7
Human Services	70.0	4.0
Total	1,704.5	100.0

Table 6.5-1. Northwest Community College Enrolments, 2008/09

FTE = full-time equivalent. Source: (NWCC 2009a)

6.5.2.3 University of Northern BC

The University of Northern BC (UNBC) also has its Northwest Campus in Terrace. The UNBC Northwest Regional Campus offers the following programs: Aboriginal Teacher Education Bridging Initiative, Bachelor of Social Work, Master of Education, Master of Arts in First Nations Studies, Certificate in First Nations Studies, general arts, and summer courses (UNBC 2010).

6.5.2.4 Skeena Native Development Society

The SNDS provides employment, training, and support services for Aboriginal residents throughout northwestern BC. Programs are offered in partnership with Human Resources and Skills Development Canada (SNDS 2007b).

6.6 EMPLOYMENT AND INCOME

6.6.1 Employment and Participation

Terrace's primary employers have traditionally been the municipal, provincial, and federal governments, the school district, college, and the hospital (Bridges and Robinson 2005). Skeena Cellulose used to be one of the most important employers, accounting for approximately 300 jobs between its lumber and sawmill operations until 2007 (Invest BC 2009).

In 2006, and based on the latest census data available, Terrace had 8,730 people in its potential labour force (i.e., all members of the population over 15 years of age). Approximately 6,000 people were in the labour force. This translated into a 69% labour force participation rate (BC Stats 2009c).

Terrace's unemployment rate was 9% in 2006, slightly higher than the provincial rate, but lower than other communities in northwestern BC. For example, Prince Rupert's unemployment rate was 13% and the RDKS was 14%. In 2008, approximately 500 people were collecting employment insurance (BC Stats 2008f).

Employment is generated from various occupational areas. Approximately 25% of residents were employed in occupations related to sales and services. Transportation-related jobs and equipment operations accounted for 900 (16%) of the jobs in Terrace. Together, primary and secondary industries provided over 450 jobs to Terrace residents, including primary production labourers; machine operators in manufacturing; and occupations unique to forestry, mining, oil and gas, and fishing. Business, finance, and administration also represented 14% of jobs, mainly in clerical positions (BC Stats 2009c).

6.6.2 Income and Earnings

The public sector was the most dominant employment area in Terrace, accounting for 26% of the total local income generated in 2006. The second-most prevalent aggregate income earnings came from mining and mineral processing, representing 22% of the area's income source. However, this was most likely concentrated at the Alcan operations in Kitimat (Horne 2009).

Forestry, despite the sector's decline from the 1990s, still accounted for 14% of employment incomes in the Kitimat-Terrace area. This is down 7% from 1991, when the sector provided 21% of the area's total income. Construction accounted for 5% of incomes in Terrace and the tourism industry accounted for 4% (Horne 2009).

For all income generated, Terrace residents had a median income of \$25,800, which parallels the provincial median levels. Those residents specifically working full-year, full-time had a median income of approximately \$46,000, which was slightly above the provincial median of \$42,200. Approximately 79% of income came from employment, while the rest was from other sources, such as government transfers (BC Stats 2009c).

6.7 SOCIAL AND HEALTH ISSUES AND SERVICES

6.7.1 Social and Health Issues

6.7.1.1 Health Index

The Terrace LHA was ranked in the lower 25% of the 78 provincial LHAs. This ranking is based on a health index calculated on potential years of life lost (PYLL) due to various causes (BC Stats 2008e).

6.7.1.2 Community Wellbeing

Out of 26 regional districts in BC, the RDKS has the highest level of economic hardship, which is calculated through community characteristic indicators such as levels of income assistance. The Terrace LHA had the third-highest (i.e., worst) ranking for economic hardship (BC Stats 2008e).

6.7.1.3 Crime, Drugs and Youth at Risk

Terrace's level of serious crime (i.e., violence and property offences) is similar to BC's average. However, rates for serious juvenile crime are almost double that of the province and have increased steadily over the last five years (BC Stats 2008f).

A majority of the drug- and alcohol-related issues in Terrace relate to homelessness. Substance abuse has also been linked to increased economic hardship in the community in recent years (Christiansen, 2007, pers. comm.).

In 2008, the number of children in care was 16.2 children per 1,000. This is more than 65% higher than the provincial average. Teen pregnancy also doubled the provincial rate. There are reportedly more children and youth at risk in Terrace's LHA, ranking as the fourth worst index level in the province (BC Stats 2008f).

6.7.2 Social and Health Services

6.7.2.1 Health Care Facilities

Terrace has one hospital, the Mills Memorial Hospital, and it is the primary medical facility in northwestern BC. The hospital cares for local residents, as well as those that are transferred there from remote communities in northwestern regions of the province.

At one point, the facility had 100 beds, but now, along with the decline in population and economy, there are only 39, including 4 intensive care beds (Christiansen, 2007, pers. comm.). The hospital also includes a 10-bed psychiatric unit, which serves as the only in-patient unit in the northwest (Northern Health 2009). The hospital also provides education, prevention, and community-based health programs (Christiansen, 2007, pers. comm.).

Terrace also has a facility for assisted living, Terraceview Lodge. The 75-bed facility is for older residents and those with disabilities.

The Northern Health Authority operates group homes for people with mental illnesses. Seven Sisters, a psychiatric outpatient centre, has approximately 20 beds. In addition to the centre, Terrace has two local group homes for those with mental disabilities (Christiansen, 2007, pers. comm.).

6.7.2.2 Health Professionals

There are 16 general physicians and 21 specialists in Terrace. Specialty physicians include: obstetrics, psychiatry, general surgery, urology, ophthalmology, otolaryngology, paediatrics, anaesthetics, radiology, nuclear medicine, pathology, and internal medicine (TEDA 2006).

6.7.2.3 Social Support Services

A wide range of social services, programs, and assistance are available in Terrace for youth, women, and First Nations. Information on social services and programs is available through the City of Terrace (2009), TEDA (2006), and other local organizations.

Drug and alcohol treatment programs are offered at the Northwest Drug and Alcohol Centre. Counsellors at the centre are over-capacity as the demand for support and programs are higher than available resources (Christiansen, 2007, pers. comm.).

6.7.3 Emergency and Protection Services

A 911 Service was installed in November 2008 and officially launched in February 2009 for the RDKS. Calls generated within the RDKS 911 Service Area are answered at the Primary Public Safety Answering Point operated by the Prince George RCMP Operational Communications Centre (RDKS 2009). However, 911 service is unavailable for the Nass area and communities north of Meziadin Junction (Webber, 2009, pers. comm.).

6.7.3.1 Police

The RCMP serves Terrace and the surrounding rural and unincorporated areas. The local RCMP detachment has an emergency response team, which services the broader northwestern region. The detachment employs 45 regular members; 1 staff sergeant; 10 municipal employees; 5 public service employees, and 2 victim assistance contractors (City of Terrace 2009).

The Terrace RCMP supports local community policing, including the First Nations communities near Terrace, as the detachment recognizes the importance of community involvement in crime prevention (City of Terrace 2009).

The main issues facing the RCMP in Terrace include drug- and alcohol-related accidents, domestic violence, and traffic accidents caused by speeding and unfamiliarity with roads (Fenson, 2007, pers. comm.).

6.7.3.2 Fire

Terrace's fire department is responsible for fire suppression, fire prevention, first response (in partnership with BC Ambulance), highway and technical rescues, hazardous material situation response, and alarm monitoring (Terrace Fire Department n.d.).

The area for which the department is responsible for is approximately 8 km². In remote area emergencies, BC Ambulance Service can provide helicopters (Weeber, 2009, pers. comm.).

The fire department has two fire engines and is staffed with one Fire Chief, four lieutenants, and three full-time firefighters. The department is highly dependent on approximately 25 volunteer firefighters, (Weeber, 2009, pers. comm.).

6.7.3.3 Ambulance

Terrace is serviced by one full-time ambulance, and two part-time ambulances (on a call-out basis during the day) which are administered by BC Ambulance Service. There are 4 full-time and 18 part-time employees who are trained as Primary Care Paramedics (Spencer, 2009, *pers. comm.*). In 2006, the detachment received approximately 2,600 calls. This is an 85% increase from the amount of calls received in 1996 (Ambulance Paramedics of BC 2009).

BC Ambulance and the Terrace Fire Department work together on the First Responder Program, with an aim of ensuring that critical medical interventions such as early defibrillation, Cardiopulmonary Resuscitation (CPR), airway management, and spinal stabilization can still be delivered in case of delayed paramedics.

6.8 INFRASTRUCTURE

6.8.1 Housing and Property Value

In 2006, there were 4,320 occupied private dwellings. Out of these dwellings, 72% were occupied by their owners, while the rest were occupied by renters (BC Stats 2009c). Approximately 65% of the units were single-detached homes. In 2008, the average value of a single family home was reported to be approximately \$178,200 and approximately \$64,700 for a multi-family unit (Invest BC 2009).

There is an overall shortage of affordable and low-income housing. Most apartment buildings downtown are full. Housing is also available in Kitimat, approximately 45 minutes down the highway (Houlden 2009, *pers. comm.*).

6.8.2 Utilities

BC Hydro provides electricity to Terrace residents and businesses while Pacific Northern Gas supplies natural gas. Water is treated with fluoride and chlorine and is provided by the Terrace Municipal Well (Invest BC 2009). Water supply comprises treated surface water from the Skeena River watershed. Sewage treatment is based on a primary, lagoon system. Major capital improvements include wells and upgrading the sewage treatment plant (TEDA 2006).

Terrace's water and sewer services systems currently serve approximately 12,000 residents. The same systems accommodated Terrace's population of 15,000 in the 1990s, and are designed to serve potential population growth. A new landfill, operated by the RDKS, is currently going through permitting and is expected to open in the near future (Webber, 2009, pers. comm.).

6.8.3 Communications

Telus, NorthwesTel, and Bell Canada provide telecommunications services, including telephone, cellular service, and Internet to Terrace and the surrounding area (TEDA 2006).

The Terrace Standard as well as the Terrace Times are weekly print publications. In addition, several newspapers from around BC and across the country, including the Vancouver Sun, Vancouver Province, Globe & Mail, and National Post are available at local newsstands on a daily basis. The Terrace Standard also publishes the Northern Connector, which is distributed throughout northwestern BC once per week.

6.8.4 Transportation and Access

6.8.4.1 Regional Highways, Railways and Air Transport

Terrace is along the Yellowhead Highway (Highway 16), between Prince Rupert to the west and Prince George to the east. Highway 37 is just a few kilometres to the east of Terrace and provides access north to the Yukon. Terrace is also serviced by CN and VIA rail passenger service.

The Northwest Regional Airport serves the cities of Terrace and Kitimat and is a fundamental entry access point for northwestern BC. The Northwest Regional Airport is owned and operated by the Terrace-Kitimat Airport Society, and has two paved runways: 7,500 feet and 5,373 feet (NAV Canada 2009). The airport has experienced a steady growth in activity since 2002 and was expanded in 2007 (Northwest Regional Airport 2008).

The airport is served by three airlines and three helicopter companies. Fuel, ground handling, and car rental services are available on-site.

6.8.4.2 Public Transit

Coast Bus Lines Ltd. operates the Terrace transit system and has seven routes. Buses are equipped with bike racks and there are also wheelchair-access and HandyDart vehicles. The City, the RDKS, and BC Transit share costs of the transit system. Decisions about fares, routes, and service levels are made by Terrace City Council, based on information and planning provided by the Municipal Systems Program of BC Transit (BC Transit 2009).

7. Smithers





7. Smithers

7.1 OVERVIEW

Situated in the Bulkley Valley, Smithers is another key regional service centre for northwestern BC. Midway between Prince Rupert and Prince George on the Yellowhead Highway 16, Smithers is a transportation and industry hub that also offers a wide range of outdoor activities to local residents and tourists alike.

7.2 GOVERNANCE AND COMMUNITY PLANNING

7.2.1 Town of Smithers

One mayor and six councillors are elected every three years in Smithers. Council's role is to provide guidance, set policy statements and engage with local, provincial, federal, and First Nations governments. The current mayor is Cress Farrow. The mayor and each councillor are responsible for a number of committees. Council meetings take place twice per month. Two public delegations may be heard at each regular council meeting (Town of Smithers 2009b).

7.2.2 Community Planning

The current OCP for the Town of Smithers was adopted in 2000 but is in the process of revision (Town of Smithers 2009a). The Smithers OCP describes the community profile, land use policies and plan, development permit areas, and plan implementation. The community goals and guiding objectives presented in the OCP are to:

- maintain a small town atmosphere;
- support a vibrant, attractive downtown;
- encourage a diversified local economy;
- protect the natural environment;
- o meet the housing needs of all residents and future residents;
- support heritage conservation;
- promote the safe movement of pedestrians and cyclists while maintaining efficient vehicle circulation;
- maintain and enhance park, recreational, and community facilities for all Smithers residents (Town of Smithers 2000).

7.3 ECONOMY

Smithers' economy has historically been based on natural resources, in particular forestry, mining, and agriculture, with recent growth in tourism (Tyhee Forestry Consultants 2006; Town of Smithers n.d.). Several external factors also affect the economy, including market demands for natural resources and decisions made by major employers and governments (Town of Smithers 2000).

7.3.1 Economic Strategy

The Town of Smithers' economic strategy outlined in its 2000 OCP draws partially on a Community Economic Development Strategy developed in 1998. The Town of Smithers considers its economy to be broad and diverse. The policies within the economic strategy concern the following:

- Retain and strengthen economic diversity
- o Maintain economic, social, and environmental quality of life;
- o Retain or expand government offices in Smithers;
- o Support viable, sustainable, and environmentally sensitive activities by resource industries;
- Business initiatives (e.g., secondary manufacturing) that provide added value to resources;
- Enhance the regional airport and rail service;
- Support for increased ferry and cruise ship service at Prince Rupert;
- Enhance its role as a regional retail and wholesale centre;
- Develop and support tourism and recreation;
- Highway 16 upgrading;
- Streamline the development process while maintaining community input and consultation;
- Support for charity gaming (Town of Smithers 2000).

7.3.2 Forestry

The Town of Smithers considers forestry to be the mainstay of its local economy (Town of Smithers n.d.). The Smithers-Houston area's after-tax income dependency on forestry and associated manufacturing was 31% in 2006 (Horne 2009).

7.3.3 Services

Smithers hosts a wide range of commercial, business, administrative, recreational, and cultural services. As such, it is an important regional service centre and transport hub for northwestern BC and for the Bulkley-Nechako Regional District. It is also a centre for government services (Town of Smithers 2005, n.d.). The Smithers-Houston area's after-tax income dependency on the public sector was 23% in 2006 (Horne 2009).

7.3.4 Mining

Some 40 mineral exploration projects were in the large Smithers-Houston area of influence in 2007, with expenditures totalling \$37 million (BC MEMPR 2008). Smithers is becoming known as the mining hub of northwestern BC (Tourism BC 2010). The Smithers-Houston area's after-tax income dependency on mining and mineral processing was 9% in 2006 (Horne 2009).

The NWCC School of Exploration and Mining is administered in Smithers. It is a partnership between industry (the Smithers Exploration Group), and the college; it is also influenced by First Nations and other governments (NWCC 2009b; Smithers Exploration Group n.d).

7.3.5 Tourism

Eco-tourism and recreation opportunities contribute to the tourism potential in Smithers (Town of Smithers n.d.). Easy access to the outdoors and availability of local entertainment contribute to Smithers' tourism potential. Tourism activities include fishing, boating, camping, hiking, skiing, shopping, and music (Tourism BC 2010). The Smithers-Houston area's after-tax income dependency on tourism was 5% in 2006 (Horne 2009).

7.3.6 Agriculture

Agriculture in the Smithers (Bulkley Valley) area includes produce and livestock (Town of Smithers n.d.). The Smithers-Houston area's after-tax income dependency on agriculture and food and beverage manufacturing was 2% in 2006 (Horne 2009).

7.4 POPULATION AND DEMOGRAPHICS

In 2006, Smithers had a reported population of 5,215, which was a decrease of 3.7% from its 2001 total of 5,415. Approximately 52% of the population was female, with the ratio of women to men having increased from 2001. The median age of males and females in Smithers were 35.1 and 37.1 years, respectively; this was lower than the provincial median ages. In comparison to the rest of BC, Smithers had fewer people aged 45 and above and relatively more aged 24 or below. Table 7.4-1 outlines the population and demographics for Smithers between 2001 and 2006.

		Smit	BC			
	2	2001		2006		06
Age Group	Male	Female	Male	Female	Male	Female
Age 0–14	25.1%	23.0%	24.1%	20.8%	17.3%	15.8%
Age 15–24	14.6%	14.5%	14.2%	13.7%	13.6%	12.6%
Age 25–44	30.4%	30.9%	27.5%	27.5%	27.1%	27.6%
Age 45–64	21.4%	20.6%	24.7%	25.2%	28.5%	28.4%
Age 65 and over	8.4%	11.0%	9.5%	12.8%	13.5%	15.6%
Total	2,650	2,765	2,530	2,690	2,013,990	2,099,495
% Total Change	-	-	-4.5%	-2.7%	-	-
% Gender	48.9%	51.1%	48.5%	51.5%	49.0%	51.0%
Median Age	32.5	34.1	35.1	37.1	40.0	41.5
Total (Male + Female)	5,	,415	5,	,215	4,11	3,485

Table 7.4-1. Smithers Population: 2001 to 2006

Note: To ensure percentages summed to 100%, totals were adjusted minimally when calculating percentages to account for anomalies in the Statistics Canada data. Absolute data for individual categories used to calculate percentages and for the totals presented above have not been adjusted, and may contain irregularities derived from the original source. Source: (Statistics Canada 2002, 2007b).

7.5 SKILLS BASE AND EDUCATION LEVELS

7.5.1 Student Performance and High School Completion

The provincial English exam non-completion rates from Grade 12 students in the Smithers LHA were 32%, compared with 23% for BC between 2005 and 2008. In 2007/2008, only 5% of 18-year olds did not graduate from high school, compared to 26% provincially. 2007/2008 test scores from students in grades four and seven showed that greater proportions of students in the Smithers LHA were assessed as below standard in writing, and math than is average with the province. A smaller proportion of

students in Smithers were below standard in reading, compared to the provincial average (BC Stats 2008d).

Approximately 25% of the Smithers population aged over 15 years have not completed high school. An estimated 35% of the population over 15 years report attaining a high school certificate as their highest educational attainment. Maximum education attainment in Smithers is presented in Table 7.5-1. The proportions of the population that had qualifications in trades, college certificates, and university in 2006 are 9%, 14%, and 18%, respectively (Statistics Canada 2007b).

		Smithers			BC	
Highest Level of Schooling	Total	Male	Female	Total	Male	Female
Total population aged 15+	3,975	1,895	2,080	3,394,910	1,649,590	1,745,320
No high school certificate or diploma	24.6%	25.4%	23.8%	19.9%	20.3%	19.5%
High school or postsecondary certificate	34.7%	31.7%	37.3%	27.9%	26.5%	29.2%
Trades certificate or diploma	9.2%	15.6%	3.6%	10.9%	14.6%	7.3%
College certificate or diploma	14.0%	11.1%	16.6%	16.7%	14.4%	18.8%
University certificate, below a bachelor	4.5%	3.7%	5.3%	5.4%	4.6%	6.2%
University certificate, diploma or degree	13.0%	12.4%	13.5%	19.3%	19.6%	19%
Total population aged 15-24	730	380	350	538,010	275,720	262,290
No high school certificate or diploma	41.1%	35.5%	47.1%	37.3%	39%	35.6%
High school or postsecondary certificate	46.6%	47.4%	45.7%	41.3%	41.7%	40.8%
Trades certificate or diploma	3.4%	6.6%	0.0%	3.9%	4.5%	3.1%
College certificate or diploma	2.1%	3.9%	0.0%	8.1%	7.3%	9%
University certificate, below a bachelor	2.7%	3.9%	0.0%	3%	2.6%	3.4%
University certificate, diploma or degree	4.1%	2.6%	7.1%	6.4%	4.9%	8.0%
Total population aged 25-34	625	325	295	497,715	240,980	256,735
No high school certificate or diploma	18.5%	22.7%	13.6%	9.4%	11%	7.9%
High school or postsecondary certificate	37.1%	30.3%	44.1%	26.2%	29%	23.5%
Trades certificate or diploma	6.5%	12.1%	0%	9.3%	11.8%	6.9%
College certificate or diploma	12.9%	10.6%	15.3%	20%	17.3%	22.5%
University certificate, below a bachelor	2.4%	3.0%	3.4%	6.2%	5.5%	6.8%
University certificate, diploma or degree	22.6%	21.2%	23.7%	29%	25.4%	32.4%
Total population aged 35-64	2,100	970	1,130	1,786,750	868,970	917,780
No high school certificate or diploma	15.9%	18.2%	14.2%	13.2%	14.0%	12.4%
High school or postsecondary certificate	33.0%	29.7%	36.4%	25.8%	23.5%	28%
Trades certificate or diploma	11.9%	18.2%	5.8%	12.7%	17.1%	8.6%
College certificate or diploma	17.3%	14.6%	20.0%	19.5%	16.7%	22.1%
University certificate, below a bachelor	6.2%	3.6%	8.4%	6.1%	5.1%	7%
University certificate, diploma or degree	15.7%	15.6%	15.1%	22.8%	23.7%	21.9%

Table 7.5-1. Maximum Level of Education Attainment as a Percent of Total Population:
Smithers 2006

Note: To ensure percentages summed to 100%, totals were adjusted minimally when calculating percentages to account for anomalies in the Statistics Canada data. Absolute data for individual categories used to calculate percentages and for the totals presented above have not been adjusted, and may contain irregularities derived from the original source. Source: (Statistics Canada 2007b).

Higher proportions of women than men in the 15-to-24-year age bracket had not completed high school in 2006, yet this cohort of women also demonstrated higher rates of university degree attainment at the bachelor level or above. The population aged 25 to 34 years held the most

university qualifications, while trades were common among all age groups. Compared to other age categories, a higher percentage of people aged between 35 and 64 years had obtained at least a high school certificate or above, and this age group possessed more college degrees than any other cohort (Statistics Canada 2007b).

Overall, Smithers had a greater percentage of people with no high school certificate or only a high school certificate in comparison to BC's average. In addition, Smithers residents had proportionately fewer trades, college, and university qualifications than the province. However, a greater proportion of the Smithers population had college or university certification (Statistics Canada 2007b).

7.6 EMPLOYMENT AND INCOME

7.6.1 Employment and Participation Rates

In 2006, Smithers' labour force (i.e., the total population aged 15 years and over) totalled 3,975 people; out of which there were slightly more females than males. Smithers had a 71.2% employment participation rate in 2006, which was down from 74.7 in 2001. The total male and female participation rates in Smithers were higher than the provincial average levels. Smithers employment participation and unemployment rates between 2001 and 2006 in comparison to the provincial averages are outlined in Table 7.6-1.

Labour	Sn	nithers, 2	001	S	mithers, 2	006	BC, 2006			
Force	Total	Male	Female	Total	Male	Female	Total	Male	Female	
Total Population										
15+	-	-	-	3,975	1,890	2,080	3,394,910	1,649,590	1,745,320	
Participation Rate	74.7%	82.3%	68.1%	71.2%	79.1%	64.4%	65.6%	70.7%	60.7%	
Unemployment										
Rate	9.3%	10.6%	8.1%	8.5%	7.4%	9.3%	6.0%	5.8%	6.3%	

Table 7.6-1. Employment and Participation: Smithers 2001 and 2006

Source: (Statistics Canada 2002, 2007b).

In 2006, the most significant industries to the labour force included: business services (17%); retail trade (12%); and agriculture and other resource-based industries (12%). The 'agriculture and other resource-based industries' sector employed proportionately more people than average in BC (the sector represented 5% of the BC labour force). The distribution of labour in Smithers was relatively diverse, with other contributing industries including educational services (10%), health care and social services (9%), manufacturing (6%), finance and real estate (5%), construction (4%), and wholesale trade (2%). Other services made up 23% of the labour force (Statistics Canada 2007b).

In 2006, Smithers' labour force was primarily employed in occupations related to: sales and service (27%); trades, transport, and equipment operation (16%); business, finance, and administration (13%); social science, education, government, or religion (10%); and management (9%). Occupations related to sales and service; social science, education, government, and/or religion; natural sciences (7%); primary industry (6%); and processing, manufacturing and utilities (5%) were more prevalent in Smithers than the respective provincial averages.

7.6.1.1 Unemployment

Approximately 240 people were reportedly unemployed in Smithers in 2006 (Statistics Canada 2007b). The unemployment rate for the community was at 8.5%, having fallen from 9.3% in 2001. The 2006

unemployment rate was slightly higher than the provincial unemployment rate (6%), yet well below rates in most of the other study communities.

7.6.2 Income and Earnings

Annual median earnings were approximately \$25,005 in 2005, similar to provincial levels. That same year, females in Smithers reported median earnings of \$20,645, which was on par with the female median for the province. However, males from Smithers reported median earnings of \$37,647, which was substantially higher than the \$32,375 average for BC (Statistics Canada 2007b).

Full-time median earnings for men and women in Smithers were estimated at \$52,331 and \$32,117, respectively. Males in Smithers earned significantly more than men province-wide, while women earned less than the full-time median for women in BC (Statistics Canada 2007b).

The residents of Smithers over 15 years reported a median income after tax of \$23,447 in 2005, which was slightly more than the provincial median of \$22,785. The median income after tax for the males was estimated at \$33,573, which was higher than BC. Females had a median income after tax of \$19,121, which was lower income than the provincial female median (Statistics Canada 2007b).

In 2005, approximately 79.2% of Smithers' collective income came from employment; 12.1% from government transfers, and 8.8% from other sources. The proportions of income derived from employment and government transfers were slightly higher than the average provincial levels (Statistics Canada 2007b).

Table 7.6-2 outlines the earnings and income for Smithers' population in 2005 as it compared to that of BC.

Table 7.6-2.	Earnings and Income	for the Smithers Pop	ulation Over 15 Y	(ears: 2005
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	Smithers					
	Total	Male	Female	Total	Male	Female
Annual median earnings	\$25,005	\$37,647	\$20,645	\$25,722	\$32,375	\$20,458
Annual full-time median earnings	\$42,207	\$52,331	\$32,641	\$42,230	\$48,070	\$36,739
Median income after tax	\$23,447	\$33,573	\$19,021	\$22,785	\$28,251	\$18,930
Earnings as a % of total income	79.2%	85.5%	69.0%	75.1%	78.5%	69.8%
Government transfers as a % of total						
income	12.1%	6.6%	20.6%	10.7%	7.9%	15.0%
Other money as a % of total income	8.8%	7.7%	10.4%	14.2%	13.6%	15.2%

Source: (Statistics Canada 2007b).

7.7 SOCIAL AND HEALTH ISSUES AND SERVICES

7.7.1 Social and Health Issues

7.7.1.1 Health Index

On BC Stats' index of health problems, the Smithers LHA was ranked as approximately average among other LHAs in the province in 2008 (BC Stats 2008c). The average life expectancy at birth between 2004 and 2008 was estimated at 79.4 years for residents of Smithers, which is slightly below the 81.1-year life expectancy average for BC (BC Stats 2008d).

The average infant mortality rate between 2004 and 2008 in Smithers was 5.4 per 1,000 live births, above the provincial average of 4.1 (BC Stats 2008d).

Teen pregnancies are more common in Smithers than the provincial average, with 24.9 pregnancies estimated per 1,000 women aged 15 to 17 years between 2004 and 2006. Provincially, this rate was 16.2 per 1,000. Child abuse was also more common in Smithers, with an estimated 17% abuse rate in the community in 2008, compared to 7.5% provincially (BC Stats 2008d).

7.7.1.2 Crime

On BC Stats' 2008 index of crime,⁸ the Smithers LHA was given an average ranking compared to the other LHAs in the province (BC Stats 2008c). This supports the contention from town administration that crime levels are mid-range and that Smithers is a relatively safe community with little major crime (Mah 2005, pers. comm.). PYLL for the Smithers population was higher than the provincial average for natural and accidental deaths as well as homicides or suicides. Average PYLL due to suicide or homicide in Smithers between 2003 and 2007 was 4.8 per 1,000 people versus 3.8 provincially (BC Stats 2008d).

Rates of crime in Smithers vary by type of crime. The serious crime rate (number of offences per 1,000 people) in Smithers between 2004 and 2006 was 12.5 (1.9 violent and 10.6 property), which was lower than the provincial rate (14.8). The serious juvenile crime rate was 9.2 (1.1 violent and 8.1 property), which was higher than the provincial rate (4.5). The motor vehicle theft rate was 8.4, roughly similar to the provincial rate (8.0). The non-cannabis drug offence rate per 1,000 people was 2.232, less than the provincial rate (2.259). The crime rate in Smithers increased by 11.6% from 2001 to 2003, compared to a 4% provincial decline (BC Stats 2008d).

7.7.2 Social and Health Services

Bulkley Valley District Hospital serves the Smithers and surrounding area. The hospital offers a range of health care facilities, services, and specialists. The Northern Health Authority provides mental health and addictions services to clients in Smithers and surrounding areas. A team of professionals provides care and treatment using a coordinated approach.

Smithers is the regional headquarters for various ministries, including the BC Ministry of Children and Family Development and the Ministry of Employment and Income Assistance. In addition, there are a broad range of community organizations and service groups including:

- Smithers Community Services Association
- McCreary Centre Society
- Pregnancy Outreach and Counselling
- Supported Child Development Program
- Dze L K'ant Friendship Centre
- o Lions Club
- o Rotary Club

⁸ BC Stats Index of Crime is based on several indicators, namely: serious violent crime rates, serious property crime rates, and the number of serious crimes per police officer. A higher overall index and lower ranking indicates crime is less controlled or more of a serious issue.

7.8 EMERGENCY AND PROTECTION SERVICES

The BC Ambulance Service provides support for Smithers as well as surrounding communities from Houston to Hazelton. The service has 2 full-time staff and 16 part-time staff, who operate 3 ambulances.

The Smithers Volunteer Fire Department is run by a fire chief and deputy chief with 40 volunteer firefighters. The fire department's services include firefighting, first response care, highway rescue, and aircraft firefighting. In addition, the department works on issues of fire prevention and public education about fire safety (Town of Smithers 2005).

7.9 INFRASTRUCTURE

7.9.1 Housing and Property Value

In 2006, Smithers had 2,080 occupied private dwellings, 68% of which were owned by their occupants. Single-family homes made up 66% of the housing stock, which was less than the provincial total of 49% that year (Statistics Canada 2007b). Apartments represented 17.7% of the town's housing stock, while the remainder consisted of various types of row and semi-detached housing.

Approximately 70% of the housing stock in Smithers was constructed before 1986, compared to 62% for BC. Approximately \$165,489 was the average market value of a house in Smithers in 2006. Median monthly home mortgage payments were \$881, which was comparable to the provincial median of \$876. Home renters paid a median \$550 rent per month (Statistics Canada 2007b).

7.9.2 Utilities

As with Terrace, BC Hydro supplies hydropower while Pacific Northern Gas Ltd. supplies natural gas to Smithers. Residents get their drinking water from three wells, whose water supply is designed to serve a population of 7,000 before additional water sources or system upgrades will be required (Kohuch 2005, pers. comm.).

The major regional landfill site in Houston is the disposal centre for Smithers' solid waste. Sanitary sewage collection and treatment facilities have the capacity to serve a population of 9,000 people. (Kohuch 2005, pers. comm.).

7.9.3 Communications

Telus and Telus Mobility provide telecommunications services, including telephone, Internet, and cellular service to Smithers and the surrounding area. Secondary long-distance providers, a cable television provider, and four independent Internet providers also serve the community. Smithers has three radio stations (CBC, CFBV, CJFW), with CFBV providing local coverage, while CJFW, based in Terrace, and CBC/CBC-FM are available throughout the Bulkley Valley. The Interior News is the local weekly, while the Houston Daily provides regional coverage.

7.10 TRANSPORTATION AND ACCESS

7.10.1.1 Highways, Air and Rail

Smithers is along the Yellowhead Highway (Highway 16), with Houston and Prince George to the southeast and Terrace to the west.

Smithers Regional Airport has daily flights to and from Vancouver and other cities. The airlines operating through the airport include Air Canada, Central Mountain Air, Hawk Air, and NT Air (Smithers Regional Airport 2009). The Smithers railway station is served by VIA Rail's Skeena passenger service.

7.10.1.2 Public Transit

The Smithers and District Transit System is funded by the Town of Smithers in partnership with the Village of Telkwa, the Regional District of Bulkley-Nechako, and BC Transit. The system is operated by Smithers Community Services Association and services all major neighbourhoods and destinations throughout the Smithers area, including stops at the recreation centre, local college, and hospital. There is a 'fixed route' and a 'door-to-door' transit system. The former providing six scheduled trips while the latter offers customized pick ups and drop offs with advanced bookings (Smithers Community Services 2009).

8. Other Settlements: Highway 37





8.1 MEZIADIN JUNCTION

Meziadin Junction is 65 km east of Stewart at the junction of highways 37 and 37A. Gas and diesel services were available up until 2006. There was also a café, repair shop, and campground/RV park. The facilities were then closed and decommissioned and the property is for sale (Appraisals Northwest 2009).

8.2 BELL II

Bell II has developed into a modern wilderness recreation destination since it opened in 1979 as a service station on Highway 37. The lodge is the main feature of the settlement, and includes a restaurant and five chalets. Bell II provides a critical fuel service (gas, diesel, and propane) for those travelling north onto Bob Quinn, Dease Lake, and beyond, since Meziadin's gas station closed in 2006. In addition to the lodge and chalets, camping and RV hook-ups are also available. There are helicopter landing and fuelling facilities as well as a garage for minor automotive repairs (Bell II Lodge 2009).

Bell II offers seasonal eco-adventure tourism products. In the fall, world-renowned steelhead fishing is available on the Bell-Irving, Nass and other rivers with trips run through Bell II Lodge Steelhead Fishing. During the winter months, heli-skiing also attracts international clientele and tours are conducted by Last Frontier Heliskiing. Other activities include helicopter and small-plane tours, and heli-hiking expeditions (Bell II Lodge 2009).

8.3 BOB QUINN LAKE

Bob Quinn Lake, at the junction of the Eskay Creek mine access road and Highway 37, is currently just composed of basic picnic grounds. There is a bed and breakfast three kilometres south of Bob Quinn Lake. Bob Quinn Lodge is two kilometres north of the road and can accommodate up to 49 people. The lodge employs 15 people year-round who reside in trailers, as well as a number of seasonal workers on weekly rotations.

A small airstrip (IATA code: YBO) is also near the rest area, and services the Eskay Creek mine. The use of this airstrip had increased greatly with the start of construction of the Galore Creek mine, but activity has settled since the Project's suspension. Proposed projects in the area still use the airstrip as a logistical centre. Lakelse Air provides fuel, charter, and logistical support to Bob Quinn.

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