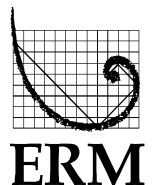


**BRUCEJACK GOLD MINE PROJECT**  
Application for an Environmental Assessment Certificate /  
Environmental Impact Statement

---

## **Appendix 19-A**

### **Brucejack Gold Mine Project: Socio-economic Baseline Report**



Pretium Resources Inc.

# BRUCEJACK GOLD MINE PROJECT Socio-economic Baseline Report



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

October 2013

# BRUCEJACK GOLD MINE PROJECT SOCIO-ECONOMIC BASELINE REPORT

October 2013  
Project #1042-009-18

Citation:

Rescan. 2013. *Brucejack Gold Mine Project: Socio-economic Baseline Report*. Prepared for Pretium Resources Inc. by Rescan Environmental Services Ltd.: Vancouver, British Columbia.

Prepared for:



Pretium Resources Inc.

Prepared by:



Engineers and Scientists

Rescan™ Environmental Services Ltd.  
Vancouver, British Columbia

# Executive Summary

# Executive Summary

---

Pretium Resources Inc. is the proponent for the Brucejack Gold Mine Project (the Project), a proposed underground gold and silver mine in northwest British Columbia. The Brucejack Property is situated within the Sulphurets District in the Iskut River region, approximately 20 km northwest of Bowser Lake or 65 km north-northwest of the Town of Stewart, BC.

This socio-economic baseline report presents a comprehensive overview of the past and present social and economic conditions and context of the people and communities with which the proposed Project is likely to interact. The information will be used to identify potential effects, develop mitigation and enhancement measures, and to assist management planning as part of the development of the Environmental Impact Statement and Application for an Environmental Assessment (EA) Certificate for the federal and British Columbia EA processes. Socio-economic baseline information will also provide a reference point against which future changes can be monitored.

Data were collected through desk-based research and semi-structured interviews. Statistical data was obtained primarily from Statistics Canada's 2001, 2006, and, where available, 2011 Census data and other government data sources such as BC Stats and Aboriginal Affairs and Northern Development Canada. Where possible, data were supplemented and contextualized through interviews with key community leaders, administrators, service providers or managers, and other professionals from communities, regional organizations, and agencies.

Northwest British Columbia, where the project is proposed, is sparsely populated and relatively undeveloped compared to other regions of the province. Communities are generally quite small and in many cases far removed from major population and governance centres and from one another. A high proportion of the population is of Aboriginal descent. First Nations and Treaty Nations present in the area include Nisga'a Nation, Skii km Lax Ha, Tahltan Nation, Gitanyow First Nation, and Gitxsan Nation. Many of these groups identify traditional territories with areas of overlap. In the contemporary period, the region has relied on primary resource industries for economic and employment opportunities. The Town of Smithers and City of Terrace are the key regional centres that provide services and supplies to much of the region. Transportation and communication options are limited and long travel distances are often required to reach service centres.

Provincial and federal ministries play an important role in the region. Local governance is provided by municipal governments or, in the case of First Nations, by elected chief and council and/or systems of hereditary leadership. Nisga'a Nation has its own government system, the Nisga'a Lisims Government, established under the *Nisga'a Final Agreement (NFA)*. Unincorporated communities and settlements generally fall under the auspices of Regional Districts which provide governance and administration of certain key services and infrastructure.

The population of northwest British Columbia has been in decline in recent decades. The closure of mills and mines across the region has forced many families to leave, creating numerous knock-on effects to local business, local government, and community morale. In the past two or three years, however, there are signs that this trend may be reversing as a new wave of investment in resource sectors and energy and infrastructure projects has sparked renewed interest in the region.

First Nation and Treaty Nation communities often exhibit lower levels of education, skills training (including trades), employment, and subsequent work experience than non-Aboriginal communities in the same area. Three predominant reasons for unemployment among the Aboriginal population are:

1) a prevalence of seasonal jobs with few year-round opportunities; 2) a lack of education, training, skills, and/or work experience; and 3) the interaction of a complex of social issues that often result in low self-esteem and/or a lack of motivation. The region's isolation also contributes to this situation, as local opportunities for education and training are generally limited, and it is difficult for many Aboriginal residents to leave the support network of their families and culture. The lack of apprenticeship positions, in particular, prevents residents from obtaining trades certificates, which are often needed for employment.

Women and Elders may face challenges or barriers in terms of employment, income, and social development. There is a general lack of support services in Aboriginal communities, particularly childcare and, to a lesser degree, Elder care. Inadequate support services can limit female participation in the workforce as women are usually the primary caregivers. While women often have higher levels of both education and employment than their male peers, particularly among Aboriginal populations, the resource extraction sector is male-dominated and women often lack industry-relevant skills and training.

The social and personal legacies of the residential school regime are also strongly evident among Aboriginal peoples; residual effects may manifest in a variety of forms, including relationship dysfunction, substance misuse, depression, and anger. A number of health issues including diabetes, heart disease, obesity, and depression are also prevalent.

This socio-economic baseline report presents an overview of a wide range of social and economic dimensions of life in communities that are most likely to be affected by development of the Project. The report provides data and commentary on topics and issues including governance; population demographics; employment and income; business and industry; education, skills, and training (level of achievement, elementary, secondary, post-secondary, and adult education); health and social services (facilities, services, trends, and issues); recreation; protection services (crime index, police, fire, and ambulance); and infrastructure (utilities, communications, transportation, and housing).

# Acknowledgements

## Acknowledgements

---

This report was produced for Pretium Resources Inc. by Rescan Environmental Services Ltd. It was written by Robin Sydneysmith (Ph.D.) and Heather Henley (MRM). Technical review and guidance was provided by Andrew Robinson (M.Sc.). Greg Norton (M.Sc.) was the project manager and Nicole Bishop (B.Sc.) the project coordinator. Graphics production was coordinated by Francine Alford (B.F.A.), GIS production was coordinated by Pieter van Leuzen (M.Sc.) and report production was coordinated by Robert Tarbuck (BTECH). Field work was conducted by Robin Sydneysmith, Heather Henley, and Andrew Robinson.



# Table of Contents

# BRUCEJACK GOLD MINE PROJECT

## SOCIO-ECONOMIC BASELINE REPORT

### Table of Contents

---

- Executive Summary ..... i
- Acknowledgements..... iii
- Table of Contents ..... v
  - List of Figures ..... ix
  - List of Tables ..... ix
- Acronyms and Abbreviations ..... xi
- 1. Introduction .....1-1
  - 1.1 Applicable Legislation (Federal and Provincial) .....1-1
- 2. Project Overview .....2-1
- 3. Objectives .....3-1
- 4. Methodology .....4-1
  - 4.1 Study Areas .....4-1
    - 4.1.1 Province of British Columbia .....4-1
    - 4.1.2 Regional Study Area .....4-1
    - 4.1.3 Local Study Area .....4-3
  - 4.2 Research Design and Approach .....4-4
    - 4.2.1 Assumptions .....4-5
    - 4.2.2 Key Information and Sources of Data .....4-5
    - 4.2.3 Data Limitations .....4-6
- 5. Governance, Administration, and Planning .....5-1
  - 5.1 Provincial Governance .....5-1
  - 5.2 Regional Governance .....5-1
  - 5.3 Aboriginal Governance .....5-1
  - 5.4 Incorporated and Unincorporated Communities .....5-4
- 6. Socio-economic Overview and Context .....6-1
  - 6.1 British Columbia (Provincial Study Area) .....6-1
    - 6.1.1 Provincial Economic Overview .....6-1
    - 6.1.2 Mineral Exploration and Mine Development in British Columbia .....6-5
    - 6.1.3 Forestry .....6-7

6.1.4	Other Industries .....	6-8
6.2	Regional Study Area.....	6-9
6.2.1	Mining in Northwest British Columbia: Past, Present, and Proposed Projects .....	6-10
6.2.2	Forestry .....	6-13
6.2.2.1	Economic Context.....	6-13
6.2.2.2	Forest Vulnerability Index.....	6-13
6.2.2.3	Forest Industry Challenges .....	6-13
6.2.2.4	Revitalization.....	6-14
6.2.3	Tourism and Recreation.....	6-14
6.3	Local Study Area Communities.....	6-15
6.3.1	Dease Lake and the Tahltan Nation Communities .....	6-15
6.3.2	Stewart.....	6-16
6.3.3	Nisga’a Nation.....	6-17
6.3.4	The Hazeltons and Skii km Lax Ha, Gitxsan, and Gitanyow First Nations .....	6-18
6.3.5	Smithers.....	6-19
6.3.6	Terrace.....	6-20
7.	Regional and Local Population Demographics .....	7-1
7.1	Regional Population.....	7-1
7.1.1	Aboriginal Population.....	7-2
7.2	Local Study Area Population Demographics .....	7-4
7.2.1	Dease Lake and the Tahltan Nation Communities .....	7-4
7.2.2	Stewart and the Highway 37 Settlements.....	7-7
7.2.3	Nisga’a Nation Communities.....	7-7
7.2.4	The Hazeltons and Skii km Lax Ha, Gitxsan Nation, and Gitanyow First Nation .....	7-8
7.2.5	Town of Smithers.....	7-10
7.2.6	City of Terrace.....	7-11
7.3	Summary of Population and Demographics .....	7-11
8.	Business and Industry .....	8-1
8.1	Regional Study Area.....	8-1
8.2	Local Study Area.....	8-2
8.2.1	Dease Lake and the Tahltan Nation .....	8-3
8.2.2	Stewart and the Highway 37 Settlements.....	8-4
8.2.3	Nisga’a Nation.....	8-5
8.2.4	The Hazeltons and Skii km Lax Ha, Gitxsan, and Gitanyow First Nations .....	8-6
8.2.5	Smithers.....	8-8
8.2.6	Terrace.....	8-9
9.	Labour Force and Employment.....	9-1
9.1	Regional Study Area.....	9-1

9.2	Local Study Area.....	9-3
9.2.1	Dease Lake and the Tahltan Nation .....	9-3
9.2.2	Stewart.....	9-4
9.2.3	Nisga’a Communities.....	9-4
9.2.4	The Hazeltons and Skii km Lax Ha, Gitxsan Nation, and Gitanyow First Nation .....	9-5
9.2.5	Smithers.....	9-6
9.2.6	Terrace.....	9-6
10.	Income and Earnings .....	10-1
10.1	Regional Study Area.....	10-1
10.2	Local Study Area.....	10-2
10.2.1	Dease Lake and the Tahltan Nation .....	10-2
10.2.2	Stewart.....	10-3
10.2.3	Nisga’a Nation.....	10-3
10.2.4	The Hazeltons and Skii km Lax Ha, Gitxsan Nation, and Gitanyow First Nation .....	10-4
10.2.5	Smithers.....	10-4
10.2.6	Terrace.....	10-5
11.	Education, Training, and Skills.....	11-1
11.1	Education Attainment .....	11-1
11.1.1	Regional Study Area Overview .....	11-1
11.1.2	Dease Lake and Tahltan Nation Communities .....	11-1
11.1.3	Stewart.....	11-3
11.1.4	Nisga’a Nation.....	11-3
11.1.5	The Hazeltons and Skii km Lax Ha, Gitxsan Nation, and Gitanyow First Nation .....	11-3
11.1.6	Smithers.....	11-4
11.1.7	Terrace.....	11-4
11.2	Primary and Secondary Education Facilities and Services .....	11-4
11.2.1	Regional Study Area.....	11-4
11.2.2	Local Study Area Communities.....	11-5
11.2.3	Dease Lake and Tahltan Nation Communities .....	11-5
11.2.4	Stewart.....	11-5
11.2.5	Nisga’a Nation.....	11-7
11.2.6	The Hazeltons and Skii km Lax Ha, Gitxsan Nation, and Gitanyow First Nation .....	11-7
11.2.7	Smithers.....	11-8
11.2.8	Terrace.....	11-9
11.3	Post-secondary Programmes and Skills Training .....	11-9
11.3.1	Regional Study Area.....	11-9
11.3.2	Dease Lake and Tahltan Nation Communities .....	11-9

11.3.3	Stewart.....	11-10
11.3.4	Nisga’a Nation.....	11-10
11.3.5	The Hazeltons and Skii km Lax Ha, Gitxsan Nation, and Gitanyow First Nation .....	11-10
11.3.6	Smithers.....	11-11
11.3.7	Terrace.....	11-11
12.	Community Health and Well-being .....	12-1
12.1	Community Well-being Index.....	12-1
12.1.1	Regional Study Area.....	12-2
12.2	Indicators of Community health, Well-being and Social Problems .....	12-3
12.2.1	Community Health .....	12-4
12.2.2	Children at Risk.....	12-8
12.2.2.1	Infant Mortality.....	12-8
12.2.2.2	Children in Care .....	12-8
12.2.2.3	Child Reading Levels .....	12-9
12.2.2.4	Income Assistance .....	12-9
12.2.3	Youth at Risk .....	12-9
12.2.3.1	Young Adults on Income Assistance.....	12-10
12.2.3.2	Young Adult Graduation .....	12-10
12.2.3.3	Teenage Pregnancies.....	12-10
12.2.3.4	Juvenile Crime .....	12-10
12.2.4	Economic Hardship .....	12-10
12.2.5	Crime and Related Social Issues .....	12-11
13.	Community Infrastructure and Services .....	13-1
13.1	Housing and Infrastructure .....	13-1
13.1.1	Regional Study Area.....	13-1
13.1.2	Dease Lake and Tahltan Nation Communities .....	13-1
13.1.3	Stewart.....	13-5
13.1.4	Nisga’a Nation.....	13-5
13.1.5	The Hazeltons and Skii km Lax Ha, Gitxsan Nation, and Gitanyow First Nation .....	13-6
13.1.6	Smithers.....	13-7
13.1.7	Terrace.....	13-8
13.2	Emergency, Health, and Social Services .....	13-8
13.2.1	Regional Study Area Overview .....	13-8
13.2.2	Dease Lake and Tahltan Nation Communities .....	13-8
13.2.3	Stewart.....	13-10
13.2.4	Nisga’a Nation.....	13-10
13.2.5	The Hazeltons and Skii km Lax Ha, Gitxsan Nation, and Gitanyow First Nation .....	13-12
13.2.6	Smithers.....	13-14

13.2.7 Terrace .....	13-15
14. Conclusions .....	14-1
References .....	R-1

### List of Figures

FIGURE	PAGE
Figure 1-1. Brucejack Gold Mine Project Location .....	1-2
Figure 2-1. Brucejack Gold Mine Project Overview .....	2-2
Figure 4.1-1. Brucejack Gold Mine Project Regional and Local Study Areas .....	4-2
Figure 6.1-1. Industry Distribution of British Columbia's Goods Sector by Gross Domestic Product and Employment .....	6-3
Figure 6.1-2. British Columbia Unemployment Rates, 1995 to 2011 .....	6-4
Figure 7.1-1. Population of Regional Study Area, 2011 .....	7-3
Figure 7.1-2. Population of Aboriginal Local Study Area Communities, 2011 .....	7-5
Figure 12.2-1. Crime Rates for Local Study Area Communities: 2001 to 2010 .....	12-13

### List of Tables

TABLE	PAGE
Table 4.1-1. Rationale for Regional and Local Study Areas .....	4-3
Table 4.2-1. Key Social and Economic Components and Indicators of the Baseline Study .....	4-5
Table 4.2-2. Primary and Secondary Information Sources .....	4-7
Table 5.3-1. Aboriginal Governance in the Regional Study Area .....	5-3
Table 6.1-1. Contribution of Resource Industries to the British Columbia Economy, 2011 .....	6-2
Table 6.2-1. Summary of Past, Present, and Proposed Industrial and Energy Projects in Northwest British Columbia .....	6-11
Table 6.2-2. Regional Forest Vulnerability Indices, 2006 .....	6-14
Table 6.2-3. Commercial Nature-based Tourism Businesses - Northern British Columbia, 2005 .....	6-15
Table 7.1-1. Regional Study Area Population, 1996 to 2011 .....	7-1
Table 7.1-2. Aboriginal Populations for Nations identified in the Brucejack Project Section 11 Order, 2001 to 2011 .....	7-2
Table 7.2-1. Local Study Area Community Population Trends, 1996 to 2011 .....	7-6

Table 7.2-2. Tahltan Population .....	7-6
Table 7.2-3. Nisga’a Nation Community Populations, July 2012 .....	7-7
Table 7.2-4. Gitxsan Nation Registered Population, July 2012.....	7-9
Table 7.2-5. Gitanyow Population, July 2012 .....	7-10
Table 8.1-1. Regional Study Area Labour Force by Industry, 2006 .....	8-1
Table 8.2-1. Local Study Area Communities Labour Force by Industry, 2006 .....	8-2
Table 8.2-2. Businesses Located in Nisga’a Villages, 2006 .....	8-5
Table 8.2-3. Select Smithers Area Businesses and Employment, 2010.....	8-9
Table 8.2-4. Terrace Businesses and Employment, 2010.....	8-10
Table 9.1-1. Regional Study Area Labour Force Characteristics by Community, 2006 .....	9-1
Table 9.2-1. Nisga’a Nation Participation and Employment Rates: SNDS 2006.....	9-4
Table 10.1-1. Regional Study Area Income Characteristics, 2005 .....	10-1
Table 10.2-1. Local Study Area Communities, Regional District of Kitimat-Stikine, and British Columbia Income Characteristics, 2005 .....	10-2
Table 11.1-1. Educational Attainment by Community 2006 .....	11-2
Table 11.2-1. Schools and Student Population Characteristics.....	11-6
Table 11.2-2. Nisga’a Schools by Villages .....	11-7
Table 12.1-1. Community Well-being, 2006 .....	12-2
Table 12.2-1. Indicators of Health Problems by Local Health Area, 2013.....	12-4
Table 12.2-2. Children at Risk Indicators by Local Health Area (Year) .....	12-8
Table 12.2-3. Indicators of Youth at Risk by Local Health Area (Year) .....	12-9
Table 12.2-4. Indicators of Economic Hardship by Local Health Area (Year).....	12-11
Table 12.2-5. Indicators of Crime, by Local Health Area.....	12-12
Table 13.1-1. Private Dwellings in Local Study Area Communities, 2001 to 2011 .....	13-2
Table 13.1-2. Community Infrastructure and Utilities .....	13-3

# Acronyms and Abbreviations



## Acronyms and Abbreviations

---

Terminology used in this document is defined where it is first used. The following list will assist readers who may choose to review only portions of the document.

<b>AAC</b>	Annual Allowable Cut
<b>AANDC</b>	Aboriginal Affairs and Northern Development Canada
<b>BC</b>	British Columbia
<b>BC ILMB</b>	British Columbia Integrated Land Management Bureau
<b>BC MARR</b>	British Columbia Ministry of Aboriginal Relations and Reconciliation
<b>BC MCS</b>	British Columbia Ministry of Community Services
<b>BC MEMPR</b>	Ministry of Energy, Mines and Petroleum Resources
<b>BC MEMNG</b>	British Columbia Ministry of Energy, Mines and Natural Gas
<b>BC MFLNRO</b>	British Columbia Ministry of Forests, Lands and Natural Resources Operations
<b>BC MOE</b>	British Columbia Ministry of Environment
<b>BC MOFR</b>	British Columbia Ministry of Forest and Range
<b>BC MTCA</b>	British Columbia Ministry of Tourism, Culture and the Arts
<b>BCFRT</b>	BC Forestry Revitalization Trust
<b>CBC</b>	Canadian Broadcast Corporation
<b>CMHC</b>	Canada Mortgage and Housing Corporation
<b>CWB</b>	Community Wellbeing
<b>EA</b>	Environmental Assessment
<b>ELL</b>	English-language Learner
<b>GDC</b>	Gitksan Development Corporation
<b>GDP</b>	Gross Domestic Product
<b>GFA</b>	Gitanyow Fisheries Authority
<b>GHCO</b>	Gitanyow Hereditary Chiefs Office
<b>GOABC</b>	Guide Outfitters Association of British Columbia
<b>GWES</b>	Gitksan Wet'suwet'en Education Society
<b>Hwy</b>	Highway
<b>ICABC</b>	Institute of Chartered Accountants of BC
<b>ICMM</b>	International Council on Mining and Metals
<b>IFC</b>	International Finance Corporation

## SOCIO-ECONOMIC BASELINE REPORT

<b>IR</b>	Indian Reserve
<b>IVHS</b>	Iskut Valley Health Services
<b>LHA</b>	Local Health Area
<b>LSA</b>	Local Study Area
<b>MABC</b>	Mining Association of British Columbia
<b>masl</b>	Metres Above Sea Level
<b>Mt</b>	Million metric Tonnes
<b>NCDES</b>	North Coast Distance Education School
<b>NCFS</b>	Nisga'a Child and Family Services
<b>NDIT</b>	Northern Development Initiative Trust
<b>NFA</b>	Nisga'a Final Agreement
<b>NLG</b>	Nisga'a Lisims Government
<b>NNADAP</b>	National Native Alcohol and Drug Abuse Program
<b>NNKN</b>	Nisga'a Nation Knowledge Network
<b>NTL</b>	Northwest Transmission Line
<b>NVHA</b>	Nisga'a Valley Health Authority
<b>NWCC</b>	Northwest Community College
<b>Pretivm</b>	Pretium Resources Inc.
<b>Project</b>	The Brucejack Gold Mine Project
<b>PYLL</b>	Potential Years of Life Lost
<b>RCMP</b>	Royal Canadian Mounted Police
<b>RDBN</b>	Regional District of Bulkley Nechako
<b>RDKS</b>	Regional District of Kitimat-Stikine
<b>Rescan</b>	Rescan Environmental Services Ltd.
<b>RSA</b>	Regional Study Area
<b>SCSA</b>	Smithers Community Services Association
<b>SNDS</b>	Skeena Native Development Society
<b>TCC</b>	Tahltan Central Council
<b>TDCSS</b>	Terrace and District Community Services Society
<b>TEDA</b>	Terrace Economic Development Authority
<b>TNDC</b>	Tahltan Nation Development Corporation
<b>UNBC</b>	University of Northern British Columbia
<b>WWNI</b>	Wilp Wixo'xskwhl Nisga'a Institute

# 1. Introduction

# 1. Introduction

---

Pretium Resources Inc. is the proponent for the Brucejack Gold Mine Project (the Project), a proposed underground gold and silver mine in northwest British Columbia (BC).

The proposed Project is located on provincial Crown land at approximately 56°28'20" N latitude and 130°11'31" W longitude. The Project falls within the Regional District of Kitimat-Stikine (RDKS), approximately 950 km northwest of Vancouver, 65 km north-northwest of Stewart, and approximately 40 km northeast from the BC/Alaska border (Figure 1-1). The Project is within or adjacent to the traditional territories of the Skii km Lax Ha and the Tahltan Nation. Parts of the access road and transmission line fall within the Nass Area as defined by the Nisga'a Final Agreement. The Project is upstream of the traditional territories of the Gitksan and Gitanyow First Nations.

## 1.1 APPLICABLE LEGISLATION (FEDERAL AND PROVINCIAL)

This report is written pursuant to the *Canadian Environmental Assessment Act, 2012* (2012) and the British Columbia *Environmental Assessment Act* (2002), which requires an assessment of the potential adverse environmental, economic, social, heritage, and health effects of the Project.



Figure 1-1

## 2. Project Overview

## 2. Project Overview

---

Pretium Resources Inc. (Pretivm) proposes to develop the Brucejack Gold Mine Project (the Project) as a 2,700 tonne per day (tpd) underground gold and silver mine. The Brucejack property is located at 56°28'20" N latitude by 130°11'31" W longitude, which is approximately 950 km northwest of Vancouver, 65 km north-northwest of Stewart, and 21 km south-southeast of the closed Eskay Creek Mine (Figure 2-1). The Project is located within the Regional District of Kitimat-Stikine (RDKS). Several First Nation and Treaty Nations have traditional territory within the general region of the Project including the Skii km Lax Ha, the Nisga'a Nation, the Tahltan Nation, the Gitxan First Nation, and the Gitanyow First Nation.

The mine site area will be located near Brucejack Lake. Vehicle access to the mine site will be via an existing exploration access road from Highway 37 that may require upgrades to facilitate traffic during mine operations. A transmission line will connect the mine site to the provincial power grid near Stewart or along Highway 37; two options are currently under consideration.

The Project is located within the boundary range of the Coast Mountain Physiographic Belt, along the western margin of the Intermontane Tectonic Belt. The local terrain ranges from generally steep in the western portion of the Project area in the high alpine with substantial glacier cover to relatively subdued topography in the eastern portion of the Project area towards the Bell-Irving River. The Brucejack mine site will be located above the tree line in a mountainous area at an elevation of approximately 1,400 masl; surrounding peaks measure 2,200 m in elevation. The access and transmission corridors will span a range of elevations and ecosystems reaching a minimum elevation near the Bell Irving River of 500 masl. Sparse fir, spruce, and alder grow along the valley bottoms, with only scrub alpine spruce, juniper, alpine grass, moss, and heather covering the steep valley walls.

The general area of the Brucejack Property has been the target of mineral exploration since the 1960s. In the 1980s Newhawk Gold Mines Ltd. conducted advanced exploration activities at the current site of the proposed Brucejack mine site that included 5 km of underground development, construction of an access road along the Bowser River and Knipple Glacier, and resulted in the deposition of 60,000 m<sup>3</sup> of waste rock within Brucejack Lake.

Environmental baseline data was collected from Brucejack Lake and the surround vicinity in the 1980s to support a Stage I Impact Assessment for the Sulphurets Project proposed by Newhawk Gold Mines Ltd. Silver Standard Resources Inc. commenced recent environmental baseline studies specific to the currently proposed Project in 2009 which have been continued by Pretivm, following its acquisition of the Project in 2010. The scope and scale of the recent environmental baseline programs have varied over the period from 2009 to the present as the development plan for the Project has evolved.

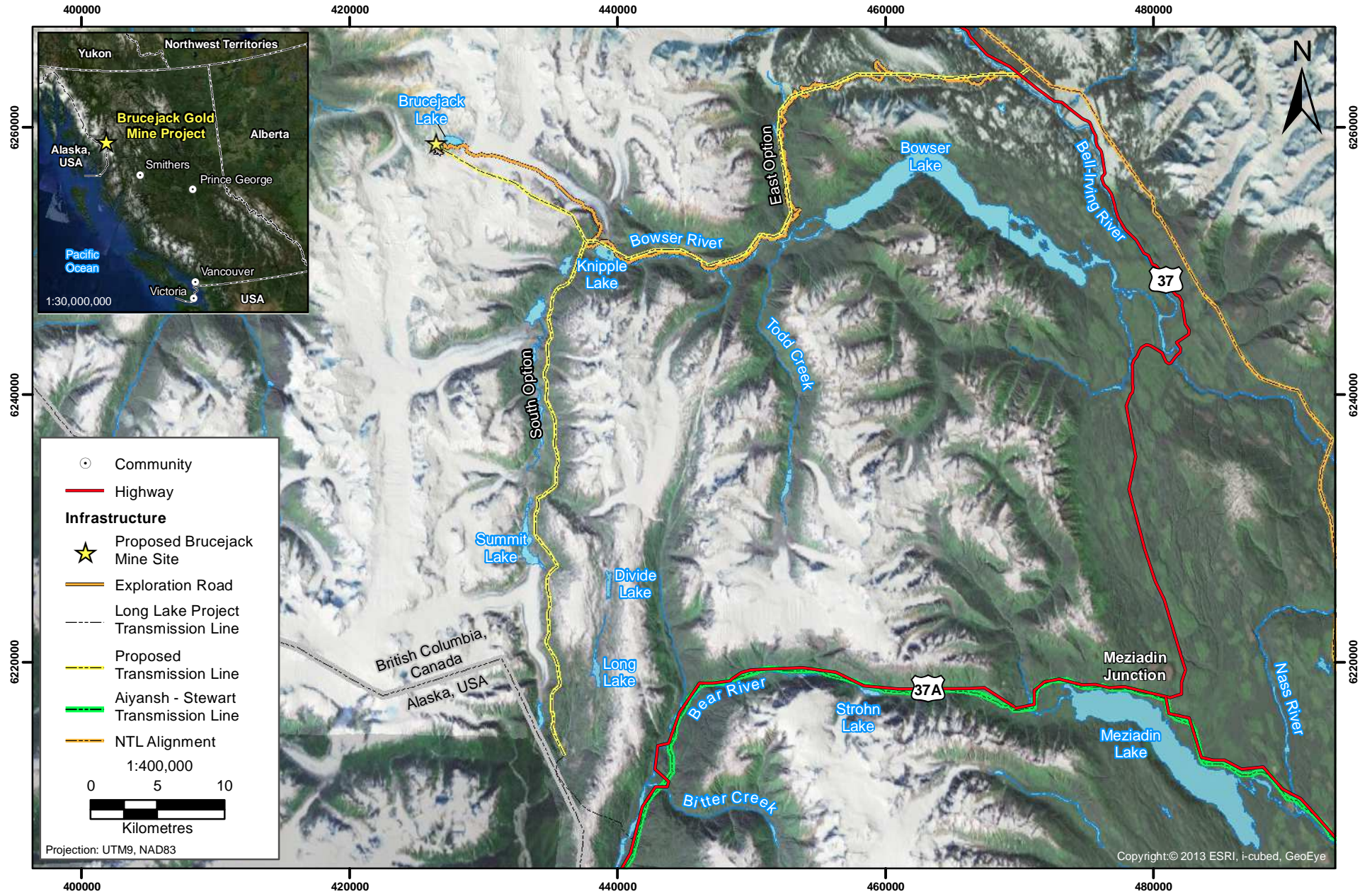


Figure 2-1

Figure 2-1



## 3. Objectives

### 3. Objectives

---

The purpose of this study is to provide a socio-economic baseline of conditions provincially, regionally and locally, such that an impact assessment may be undertaken. The impact assessment evaluates potential benefits and potential adverse effects of the proposed Project on the people and communities that are most likely to be affected.

The specific objectives of this report are to:

- present information about the past and present social and economic conditions and context within which the Project is proposed;
- build understanding of current community dynamics and trends;
- identify community considerations, interests, values, and concerns about their current and future social and economic environment, and
- provide a reference point for the assessment of potential project and cumulative effects.

This information will be used to inform the process as set out by the British Columbia Environmental Assessment Office and Canadian Environmental Assessment Agency, including the identification and assessment of potential social and economic effects, the development of mitigation and/or enhancement measures, and the development and implementation of mitigation and management plans.

## 4. Methodology

## 4. Methodology

---

### 4.1 STUDY AREAS

There are three study areas that define the spatial boundaries for the description and analysis in this report. The Project is likely to have social and economic effects to varying degrees in each of these areas. The province of BC is the largest area considered in this baseline, although it can be argued that Canada could experience some socio-economic effects as well. The Regional Study Area (RSA) includes the region that surrounds the proposed Project location, including communities and their various linkages with each other and potential interaction with the Project. The Local Study Area (LSA) is a discontinuous study area that includes both Aboriginal communities on Indian Reserves, and Nisga'a villages, municipalities, and unincorporated communities of varying size, which are likely to experience Project-related effects. The analysis of LSA communities takes a more focused look at conditions and potential change within each community or groups of communities.<sup>1</sup>

The RSA and LSA communities were selected based on their proximity to the Project and transportation routes, port location, potential downstream effects, and each community's potential interaction with Project development and operation.<sup>2</sup>

#### 4.1.1 Province of British Columbia

The province of BC is included as a study area because the Project has broad economic implications for provincial economic and natural resource development. Baseline economic information will inform an assessment of effects on BC's economy and labour force.

#### 4.1.2 Regional Study Area

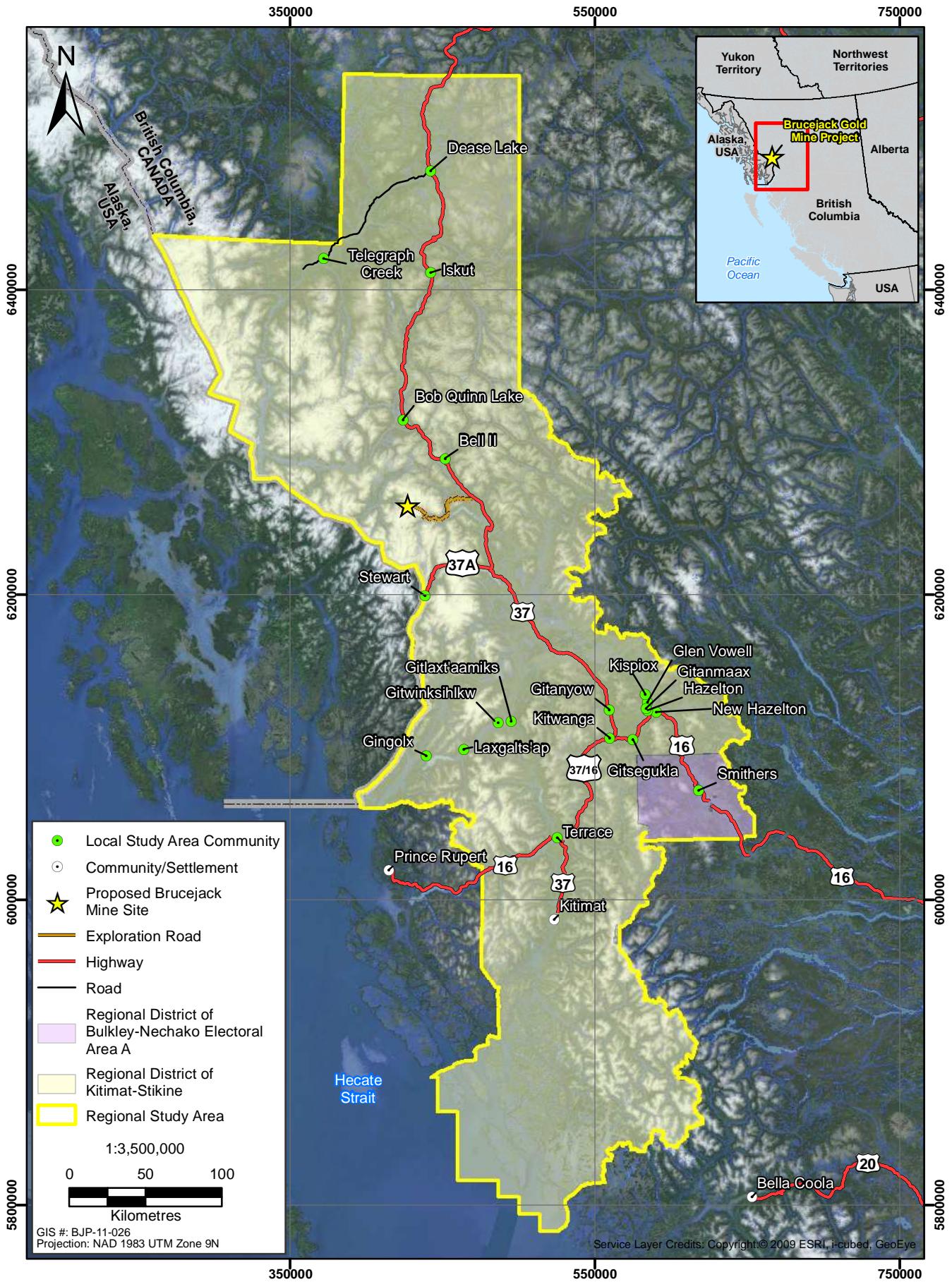
The RSA is defined in terms of two administrative regions: the Regional District of Kitimat Stikine (RDKS) and Electoral Area A of the Regional District of Bulkley Nechako (RDBN; see Figure 4.1-1). The Skeena Queen Charlotte Regional District is not included within the RSA because it is not a key centre for mining services and direct use by the Project is expected to be minimal.

A regional analysis is included because of the RSA's dependency on natural resources for economic opportunities and employment. A reliance on mining and forestry activities, in particular, distinguishes the RSA from other areas of the province. The Project is anticipated to rely largely on the RSA for human resources, supplies, services, and other requirements.

---

<sup>1</sup>The term "Aboriginal communities" is used to refer to both Indian Reserves which are established under the *Indian Act* (1985) and to the villages of Nisga'a Nation. Other communities, which are defined under the revised *Government Act* as either, incorporated municipalities or unincorporated towns or settlements may also have substantial aboriginal populations, especially in northwest BC. To refer to them as "non-Aboriginal" communities would be inaccurate. For the purposes of this report they are variously referred to as local, local study area, rural or communities.

<sup>2</sup> The RSA and LSA defined in this report differ from the RSA and LSA boundaries described in the various Brucejack Gold Mine Project biophysical baseline reports. The distinct study areas herein facilitate the capture of broader regional socio-economic trends in northwest BC as well as resource, labour and service flows which may interact with the Project, whereas potential biophysical Project interactions are typically localized in the vicinity of the proposed development.



- Local Study Area Community
- Community/Settlement
- ★ Proposed Brucejack Mine Site
- Exploration Road
- Highway
- Road
- Regional District of Bulkley-Nechako Electoral Area A
- Regional District of Kitimat-Stikine
- Regional Study Area

1:3,500,000

0 50 100  
Kilometres

GIS #: BJP-11-026  
Projection: NAD 1983 UTM Zone 9N

Service Layer Credits: Copyright © 2009 ESRI, i-cubed, GeoEye

The RDKS provides regional planning and local government services to rural and unincorporated settlements within an area of 100,000 km<sup>2</sup> in northwestern BC. Member communities include Kitimat, Terrace, Stewart, Hazelton, New Hazelton, and Dease Lake (RDKS 2012). The RDKS Board of Directors consists of six municipal councillors or mayors, appointed annually from their respective municipal councils, and six directors, elected from the rural electoral areas for three-year terms (RDKS 2012). Electoral Area A of the RDBN comprises 3,688 km<sup>2</sup>, including the Town of Smithers and the rural areas surrounding the municipality (NDIT 2010a).

The RSA includes Nisga’a Lands as defined in the *NFA* (NLG, Province of BC, and Government of Canada 1998) as well as Indian Reserves (IRs) for the Tahltan Nation, Gitksan Nation (including Skii km Lax Ha), Gitanyow First Nation, Tsimshian First Nation, Haisla Nation, and Wet’suwet’en First Nations.

#### 4.1.3 Local Study Area

The LSA is not a contiguous geographic area but is rather comprised of a number of communities spread out over almost 600 km from Dease Lake 9 in the north to the City of Terrace in the south. Communities are broadly defined as locales where people live, go to school, and raise their families. They include incorporated municipalities and unincorporated towns, Treaty Nation villages, and Indian Reserves (a.k.a. reserve communities) located within the broader RSA. During Construction, Operation, and Closure, these communities are, to varying degrees, expected to be involved and/or influenced by the Project (e.g., labour and supplies). Specific rationale for the inclusion of each community in the LSA is provided in Table 4.1-1.

**Table 4.1-1. Rationale for Regional and Local Study Areas**

Study Area	Rationale
<b>Regional Study Area</b>	
Regional District of Kitimat-Stikine and Electoral Area A of the Regional District of Bulkley Nechako	The Project will rely largely on this area of northwest BC for human resources, supplies, services, and other requirements. Employment, income, and gross domestic product impacts from the Project are expected across this region.
<b>Local Study Area Communities</b>	
Nisga’a villages (Gitlaxt’aamiks, Gitwinksihlkw, Laxgalts’ap, and Gingolx)	Nisga’a Nation may provide labour, goods, and services to the Project. Certain Project components fall within the Nass Area as defined by the <i>NFA</i> (NLG, Province of BC, and Government of Canada 1998).
Tahltan communities (Telegraph Creek <sup>1</sup> , Dease Lake 9 <sup>2</sup> , and Iskut 6)	The Tahltan may provide labour, goods, and services for the Project (as they did for the recently closed Eskay Creek Mine). A portion of the main access route from Highway 37 adjacent to Wildfire Creek passes through the traditional territory of the Tahltan Nation.
Dease Lake (unincorporated)	Dease Lake may provide labour, goods, and services for the Project. Many Tahltan Nation members also live in the community.
District of Stewart	Concentrate from the Project may be transported to the Port of Stewart by highways 37 and 37A and then shipped overseas. Stewart may provide labour and services for the Project.
Village of Gitanyow (Gitanyow 1)	The Gitanyow First Nation may provide labour and services for the Project. The proposed concentrate haul route along Highway 37A as well as the transportation of construction and operation materials along Highway 37 from Gitwangak (Kitwanga) traverses Gitanyow First Nation territory. Increased traffic may affect the safety of Gitanyow members who harvest off Highway 37, moose (due to vehicle interaction) and fish (chance of spills).

(continued)

**Table 4.1-1. Rationale for Regional and Local Study Areas (completed)**

Study Area	Rationale
<i>Local Study Area Communities (cont'd)</i>	
Village of Hazelton, District of New Hazelton, and Gitxsan reserve	These communities may provide labour, supplies, and service contracts for the Project. Skii km Lax Ha and Gitxsan members reside in communities in the communities of Gitwangak, Gitsegukla, Hazelton area. Many Project components fall within an area claimed by the Gitanmaax, Kispiox and Glen Vowell. Skii km Lax Ha.
Town of Smithers and City of Terrace	Smithers and Terrace are the primary service centres for the region. As two of the largest communities in northwest BC, these communities will likely provide some of the Project’s labour, supplies, and service contracts.

<sup>1</sup> The community of Telegraph Creek consists of several reserves, three of which are populated: Telegraph Creek 6 and 6A as well as Guhthe Tah 12.

<sup>2</sup> Dease Lake 9 and the unincorporated community of Dease Lake are both included in the LSA and are discussed separately in this report.

For the purposes of discussion this report is organized by loosely grouping these communities into six geographic areas which, from north to south, include:

1. Dease Lake and the Tahltan Nation reserve communities;
2. District of Stewart;
3. Nisga’a communities of Gitlaxt’aamiks (New Aiyansh), Gitwinksihlkw (Canyon City), Laxgalts’ap (Greenville), and Gingolx (Kincolith);
4. the Hazeltons, including the Skii km Lax Ha who reside primarily in Hazelton and Gitanmaax, and the surrounding Gitxsan Nation (Gitanmaax, Kispiox, Glen Vowell, Gitsegukla, and Gitwangak) and Gitanyow First Nations reserve communities;
5. Town of Smithers; and
6. City of Terrace.

The LSA communities are shown in relation to the proposed Project in Figure 4.1-1.

The municipalities of Prince Rupert and Kitimat are excluded from the LSA because of their distance from the Project and the likelihood that they will not experience adverse social or economic effects. Similarly, other First Nations communities within the RSA were not defined as LSA communities due to their distance and expected lack of interaction with the Project.

## 4.2 RESEARCH DESIGN AND APPROACH

As stipulated by the BC Environmental Assessment Office, the assessment process requires the production of separate social and economic impact assessment chapters within the Application/EIS. The aim of a combined socio-economic baseline is to capture the multiple, and often interacting, social and economic conditions that shape the lives of people and communities in the area. Such an integrated approach is expected to provide a more complete and meaningful basis for the assessment of social and economic effects.

Data for the study was informed by Health Canada’s *The Canadian Handbook on Health Impact Assessment*, which promotes a holistic approach to health and well-being. It recognises the interconnected relationships between communities and the physical environment. With respect to economic assessments, the Guide’s determinants of health include employment and working conditions as well as income and social status (Health Canada 1999).

### 4.2.1 Assumptions

The study assumes the following:

- The Project will derive a portion of its workforce from the communities identified in the LSA, Table 4.1-1.
- Concentrate may be hauled by truck from the mine site along the access road to Highway 37, south along Highway 37 to Meziadin Junction, and west along Highway 37A to the Port of Stewart.
- Materials required for Project construction and operation will be hauled to the site via Highway 37.
- Concentrate from the Project may be shipped from the Port of Stewart or trucked from the mine site to a rail facility along Highway 16 for transport to eastern Canada.
- Census and other statistical information, with consideration to relevant temporal constraints, adequately reflect the general characteristics of each community.

### 4.2.2 Key Information and Sources of Data

Research for the socio-economic baseline is structured around a number of distinct social and economic components or themes. These broad categories include potentially measureable indicators that will inform the identification of valued components (VCs) in the assessment of potential effects. The main social and economic components include specific and measurable indicators that form the basis for the discussion herein are summarized in Table 4.2-1 below.

**Table 4.2-1. Key Social and Economic Components and Indicators of the Baseline Study**

Research Component, Theme, or Indicator	Description/Summary*
Population Demographics	Characteristics of the relevant population including growth and decline, age structure, gender distribution, and Aboriginal population.
Governance	Administrative structure and responsibilities, levels of jurisdiction and planning.
Socio-economic Context	Location, history, and other relevant information pertaining to study socio-economic conditions and recent trends in Aboriginal and settler communities.
Economy	Economic foundations of local and regional economies and trends over time, including characterization of industry and business.
Labour Markets and Employment	Labour force characteristics, including size, participation in economy, employment and unemployment rates, income assistance rates, employment sectors, and barriers to employment.
Economic Development	Business and employment services and programs.
Education	Attainment levels and categories, programmes and facilities.
Health	Health indicators and recorded occurrences of various illnesses/diseases. Overview of health issues and services within the community.
Social	Social indicators, including substance abuse and crime. Overview of social facilities, issues, and services within the community.
Services	Health, education, and social and municipal facilities, services, and programs.
Protection	Police, fire, ambulance, and other protective services available to the communities.
Infrastructure	Utilities, transportation, communications, and housing.

\* The availability of information varies significantly between the communities and may not be available for all locations. Qualitative data may be available, but quantitative is often lacking



The report is based on review and analysis of multiple secondary sources of data and information collected between April 2012 and May 2013, including official government statistics, and other data from provincial, regional, and local organizations and government agencies (Table 4.2-2). Published social science literature, public and unpublished reports, media analyses, and the results of public involvement activities were also considered. The proponent has a data sharing agreement in place with Seabridge Gold Inc. with respect to their proposed KSM Project which allows for this report to build upon the data gathered during KSM baseline efforts carried out between 2008 and 2012.

Field work was carried out in Smithers, the Hazelton area, including several Gitksan communities, and Terrace in June of 2012. Key informant interviews were carried out with Community leaders, administrators and managers responsible for a range of social and economic issues, programs, and/or facilities. Interviews were transcribed and used primarily to supplement statistical information and contextualize understanding of existing issues and concerns in the communities. Interview data is primarily qualitative and particularly helpful to identify issues and to provide additional context and for verification of statistical and secondary source data.

### 4.2.3 Data Limitations

Census data may become quickly outdated. Some data from the 2011 census data are publically available, but new information is only gradually being released. For example the BC economy has changed significantly since the last census (2006); however, labour force data for 2011 was not yet released at the time of writing this report. Caution is necessary with respect to drawing conclusions about the study communities' current characteristics and outlooks.<sup>3,4</sup>

Direct comparisons between data sources and time periods are sometimes problematic because of variations in both geographical and statistical definitions.<sup>5</sup> Regional subdivisions of the province, for example, include areas defined by regional districts, municipal areas, health areas, economic development zones, and land management planning units. The areas included within the borders of these regions and categories rarely coincide with one another and often change over time. Furthermore, the cultural linkages and traditional territories of relevant First Nations transcend many of these contemporary boundaries or conceptual boundaries. Efforts have been made to note inconsistencies where possible.

An added complication is that most statistical data is not readily available for the RSA as defined for this study (Section 4.1.2) which includes portions of two regional districts. Data tables therefore frequently present separate statistics for the RDKS and Electoral Area 'A' of RDBN (where available) as a proxy for the RSA.

---

<sup>3</sup> Census information was collected in 2006 by both Statistics Canada and the Skeena Native Development Society (SNDS). The SNDS Labour Market Census for 2006 was released in March 2007.

<sup>4</sup> 2011 also marks the replacement of the long form census with the voluntary household survey. The change in how Statistics Canada collects data will make comparisons with previous census years problematic.

<sup>5</sup> For example, while Statistics Canada defines "unemployment" as the percentage of unemployed individuals within the active labour force, the SNDS defines it as the percentage of unemployed individuals within the total potential labour force (i.e., the entire population aged 15 to 65) and further specifies the proportion of the population who are "seeking" employment. This latter definition is similar to the Statistics Canada definition of unemployment and has been used where appropriate.

**Table 4.2-2. Primary and Secondary Information Sources**

Topic	Indicators*	Sources
Population Demographics	<ul style="list-style-type: none"> <li>Community populations</li> <li>Aboriginal membership Community population</li> <li>Community demographics (age, sex, language, and Aboriginal identity)</li> <li>Migration rates, patterns</li> </ul>	<ul style="list-style-type: none"> <li>Census of Canada (2001, 2006, 2011)</li> <li>Statistics Canada Aboriginal Population Profile (2001, 2006)**</li> <li>Tahltan Census (2007)</li> <li>Skeena Native Development Society Labour Market Census (2006)</li> <li>Aboriginal Affairs and Northern Development Canada (AANDC)</li> <li>BC Stats</li> <li>Skeena Native Development Society Labour Market Census (2006)</li> <li>Gitanyow Wilp-based Socio-cultural Needs Assessment (2010)</li> <li>Regional District of Kitimat-Stikine</li> <li>Municipal websites (Terrace, Smithers, etc.)</li> </ul>
Economic data, issues, and measures	<ul style="list-style-type: none"> <li>Potential and active labour force</li> <li>Employment rate</li> <li>Unemployment rate</li> <li>Seasonal employment</li> <li>Income and earnings</li> <li>Employment sectors</li> <li>Occupations</li> <li>Participation in mining employment</li> <li>Characteristics of local and regional business and industry</li> <li>Economic development organizations Employment support</li> </ul>	<ul style="list-style-type: none"> <li>Census of Canada (2001, 2006, 2011)</li> <li>AANDC</li> <li>Skeena Native Development Society Labour Market Census (2006)</li> <li>BC Stats</li> <li>Provincial ministry websites and data (BC MCS, BC MOE, etc.)</li> <li>Nisga’a Lisims Government</li> <li>Regional District websites, reports, plans</li> <li>Municipal websites (Terrace, Smithers, etc.)</li> <li>Tourism BC</li> <li>Invest BC</li> <li>Terrace Economic Development Authority</li> <li>Bulkley Valley Economic Development Association</li> <li>Primary qualitative research/interviews with key stakeholders from RSA and LSA</li> </ul>
Social issues, services, and infrastructure (incl. health)	<ul style="list-style-type: none"> <li>Education, skills, and training levels of attainment</li> <li>Education services and programmes</li> <li>Education facilities and infrastructure</li> <li>Community services, facilities, and infrastructure</li> <li>Policing capacity</li> <li>Emergency services</li> <li>Crime rates and types</li> <li>Prevalence of substance misuse</li> <li>Single-parent households</li> <li>Health care services and facilities</li> <li>Prevalence of substance misuse</li> <li>Housing availability and conditions</li> <li>Utilities (power, water, sewage, transportation, and communication)</li> </ul>	<ul style="list-style-type: none"> <li>Canada census (2001, 2006, 2011)</li> <li>Statistics Canada Aboriginal Population Profile (2001, 2006)**</li> <li>BC Stats</li> <li>Skeena Native Development Society Labour Market Census (2006)</li> <li>Post-secondary facility websites (Northwest Community College, Northern Lights College, etc.)</li> <li>School district websites (SD 92, 82, etc.)</li> <li>Gitanyow Wilp-based Socio-cultural Needs Assessment (2010)</li> <li>Ministry of Health Services</li> <li>Municipal/community websites (Terrace, Smithers, etc.)</li> <li>Ministry of Transportation and Infrastructure</li> <li>Primary data: key informant interviews with key stakeholders from RSA and LSA</li> </ul>

\* The availability of information varies and may not be available for all communities.

\*\* 2011 Aboriginal Population Profiles had not been released at the time of writing this report.

Statistical information, particularly for the smaller communities, may be limited or intentionally suppressed by Statistics Canada to help protect the confidentiality of personal information of people living in small communities. Availability of information varies significantly from one community to the next. In some cases information typically available for larger centres simply does not exist for their smaller counterparts. For instance, the municipalities of Terrace, Smithers, and Stewart are organized by municipal governments, and have relatively abundant information. Information on the unincorporated community of Dease Lake, on the other hand, is lacking because there are no local governing bodies to collect data. In the absence of pre-existing quantitative and qualitative studies, some sections rely on contextual information about the wider region and anecdotal evidence from community professionals and authorities with first-hand knowledge of the communities. Where possible this anecdotal evidence was corroborated with other sources and interviews.

To help address data gaps and limitations, additional data and information were generated from meetings and interviews with community managers and leaders, regional representatives, First Nations leaders and administrators, government agencies and service providers, community organizations, and other knowledge holders in 2012.

## 5. Governance, Administration, and Planning

## 5. Governance, Administration, and Planning

---

### 5.1 PROVINCIAL GOVERNANCE

The provincial government is based in Victoria and is represented by regional offices across the province, including Terrace and Smithers, and to a lesser extent in Dease Lake. Provincial ministries and services for the Stikine region were a significant presence in Dease Lake until the mid-1990s, at which time extensive restructuring saw many government employees and offices relocated to Smithers.

Outside of Terrace and Smithers the federal presence is limited to services such as RCMP and the post office, except in Aboriginal communities where AANDC and Health Canada are also involved in community affairs.

### 5.2 REGIONAL GOVERNANCE

In BC, regional districts provide a level of governance between that of the province and local, municipal governments. Regional districts were instituted in the 1960s to fulfil three basic roles: i) to provide regional representation, governance, and services at a broader level than that of the municipality; ii) to enable groups of municipalities to work together either to leverage funds or capacity or take advantage of economies of scale to meet local and/or regional needs; and iii) to provide a vehicle for local governance for rural areas, unincorporated communities, and other settlements that would otherwise have no representation or capacity to plan or administer local affairs and services (BC MCS 2006).

The RDKS provides local government services to rural and unincorporated settlements within an 100,000 km<sup>2</sup> area of northwest BC, including the municipalities of Kitimat, Terrace, Stewart, Hazelton, and New Hazelton (RDKS 2012). The RSA is rounded out by Electoral Area “A” of the RDBN, which covers 3,688 km<sup>2</sup> and includes Smithers, several unincorporated settlements, and surrounding rural areas (NDIT 2010d). Municipal elections are held every three years.

Stewart, Terrace, Hazelton, New Hazelton, and Smithers are all incorporated municipalities, governed by the BC *Local Government Act* (1996a) with an elected mayor and council. The remaining communities, including Dease Lake and South Hazelton, are not incorporated and fall under the governance auspices of the regional district.

### 5.3 ABORIGINAL GOVERNANCE

Aboriginal governance takes several forms in BC, most of which are represented in the RSA and range from hereditary systems to those outlined in the *Indian Act* (1985).

First Nations reserve communities are typically governed by an elected chief and council following rules and conventions set out in the *Indian Act* (1985). The Tahltan Indian Band and Iskut First Nation are each governed by an elected Band Council consisting of a chief and five band councillors. Elections are held every two years as stipulated by the *Indian Act* (1985).

Some First Nations, such as the Gitksan and Tahltan, are made up of several communities. In these cases individual bands may be collectively represented by a broader governance body, e.g., the Tahltan Tribal Council. Among other things, these sorts of umbrella organizations may take on the role of representing the Nation’s interest in treaty negotiations and working to foster solidarity among multiple bands or groups (e.g., families, *huwilp*, or clans). They are also often important

intermediaries in the consultation processes related to resource development in First Nations' traditional territories. Hereditary systems and other traditional elements of First Nations governance are often implemented at the tribal council level.

### Skii km Lax Ha

The *de facto* leader of the Skii km Lax Ha is the sole hereditary chief currently working to establish wider recognition as a First Nation. Ski km Lax Ha do not have a formal band structure under the Canadian *Indian Act* (1985).

### Gitanyow First Nation

Gitanyow social organization is based on the *wilp* (or house) system. There are eight houses under two clans. Each Gitanyow member belongs to a wilp that has territory within the broader Gitanyow traditional territory. The wilp is responsible for managing lands and resources within the wilp territory. Gitanyow *huwilp* include the Luuxhon, Malii, Haizimsque, Wii'litsxw, Watakhayetsxw, Gamlaxyeltxw, Gwass Hlaam, and Gwinuu. Each wilp is led by a hereditary chief (GHCO 2007).

The Gitanyow Hereditary Chiefs Office (GHCO) based in Gitanyow 1 is the governing body of the Gitanyow First Nation. The GHCO uphold Gitanyow *ayookxw* (laws) and promote the involvement of huwilp in conservation, management and sustainable development of natural resources within their territories (GHCO 2007).

The Gitanyow reserve community is governed by a chief councillor and seven councillors who are elected every two years (AANDC 2012c). The Gitanyow Band council is responsible for the day-to-day operations of the reserve, including the provision of services. The band council also acts as an agent of the federal Crown (BC MARR n.d.).

### Nisga'a Nation

Nisga'a Nation is governed by Nisga'a Lisims Government (NLG) established under the Nisga'a *NFA* between Nisga'a Nation and the governments of Canada and British Columbia which came into effect in May 2000 (NLG, Province of BC, and Government of Canada 1998; AANDC 2010c). The overarching framework of Nisga'a governance is derived from the traditional laws and practices of Nisga'a people known as *Ayuukhl Nisga'a*, with guidance and interpretation provided by the Council of Elders (NLG 2002). NLG governance is also guided by, and operates within, the *Constitution Act* (1982) and the *Canadian Charter of Rights and Freedoms*.

The structure of NLG consists of executive and legislative branches, as well as a Council of Elders. NLG has jurisdiction over Nisga'a Lands which includes the four Nisga'a villages. The president, chairperson, secretary-treasurer, and chairperson of the Council of Elders are elected at-large by Nisga'a Nation citizens. The remaining members of the Council of Elders are appointed by NLG. The executive also includes one representative of each Nisga'a Urban Local (Terrace, Prince Rupert and Vancouver), to represent Nisga'a citizens who do not live in the Nass Valley (NLG 2002, n.d.-a). Finally, each of the four Nisga'a villages is administered by its own village chief and council elected by village residents.

### Tahltan Nation

The Tahltan Central Council (TCC) was established in 1975 as an umbrella organization to collectively represent the joint interests of the Tahltan Nation's two bands. The TCC, based in Dease Lake, is the central administrative governing body for the Tahltan Indian Band, with Indian Reserves in both Telegraph Creek and Dease Lake, and the Iskut First Nation based in Iskut (TCC 2010). It is a registered society under the *BC Society Act* (1996d) and consists of an executive (President, Vice President, and

Secretary Treasurer) elected for two-year terms and representatives from ten key Tahltan families. Family representatives are nominated and ratified at the Annual General Meeting held every summer.

Gitxsan Nation

Gitxsan society is based on matrilineal descent and arranged around a wilp system. There are four Gitxsan clans (Wolf, Frog, Fireweed, and Eagle) and more than 50 house groups or *huwilp* which range in size from about 20 to 250 members (Gitxsan Chiefs’ Office 2010). Each wilp has its own watershed-based house territory with clearly defined rights and jurisdiction pertaining to access and use of resources (Morrell 1989; Gitxsan Chiefs’ Office 2010).

At the band level, each of the five Gitxsan communities has their own elected chief and councillors who oversee the day to day administration of band-level and community affairs in accordance with the *Indian Act* (1985). The broader collective interests of the Gitxsan Nation are represented by two entities. The Gitxsan Chiefs’ Office is an instrument of the Gitxsan Hereditary Chiefs, and acts as a spokesperson in matters dealing with resource management. This body engages with federal, provincial, regional and municipal governments, as well as resource companies. The Gitxsan Treaty Society was created under the *BC Society Act* (1996d) to represent the Gitxsan Nation in the BC treaty process on behalf of the Gitxsan Hereditary Chiefs. At the time of writing, the Gitxsan Hereditary Chiefs had renewed the mandate of the Gitxsan Treaty Society to “support the Simgiigyet (chiefs) and the Gitxsan people in their efforts to advocate for Gitxsan aboriginal rights in treaty negotiations and other forms of reconciliation with the Crown” (Gitxsan Chiefs’ Office 2012).

Table 5.3-1 provides a summary of the various levels and core responsibilities of governance among Aboriginal communities within the RSA.

**Table 5.3-1. Aboriginal Governance in the Regional Study Area**

Treaty Nation	Nisga’a Lisims Government	Administration of government operations Regulatory jurisdiction and administration of government programs and services; financial, land and resource, and fisheries management
	Gitlaxt’aamiks Village Government	Local governance, programs and services
	Gitwinksihlkw Village Government	Local governance, programs and services
	Laxgaltsap Village Government	Local governance, programs and services
	Gingolx Village Government	Local governance, programs and services
First Nations	Skii km Lax Ha	Aboriginal rights and title, land use planning
	Iskut First Nation	Local governance (Iskut)
		Tribal/Band governance and services
		Health
	Tahltan Central Council	Represents the Tahltan Indian Band and Iskut First Nation on issues of joint concern (e.g., Aboriginal rights and title, land use planning)
	Tahltan Band	Local governance (Telegraph Creek, Dease Lake 9)
		Tribal/Band governance and services.
	Gitxsan Chiefs’ Office	Tribal/Band governance and services
	Gitxsan Treaty Office	Aboriginal rights and title, land use planning
Gitxsan Communities (Gitwangak, Gitaanmax, Gitsegukla, Kispiox, Glen Vowel)	Band governance and services	
Gitanyow Hereditary Chiefs Office	Aboriginal rights and title, land use planning	
Gitanyow Band Council	Tribal/Band governance and services Health	

## 5.4 INCORPORATED AND UNINCORPORATED COMMUNITIES

Communities included in the LSA are a mixture of small, unincorporated towns and settlements and municipalities ranging in size from a few hundred to several thousand inhabitants.

### Dease Lake

Dease Lake is an unincorporated town administered by the Ministry of Community Services, with help from the Dease Lake Advisory Planning Commission which is an appointed board of seven community residents. The Advisory Planning Commission is primarily concerned with land planning for the community, including zoning changes. The community is identified as Community Planning Area No. 28 (Government of British Columbia 1981). Dease Lake was included in the RDKS effective December 1, 2007, and received representation on the RDKS's Board of Directors under Electoral Area F (RDKS 2012).

### Stewart and Highway 37 Settlements

Stewart is governed by the District of Stewart, which consists of six councillors and a mayor, last elected in 2011 (Invest BC n.d.). In 2012, the District of Stewart's operating expenses amounted to slightly over \$1.8 million (M. Tarrant, pers. comm.). The community also lies within the boundaries of the RDKS and has a close relationship with its American neighbour, the town of Hyder, which is directly across the border in Alaska. The Stewart-Hyder International Chamber of Commerce addresses joint community interests primarily regarding the local tourist economy.

The Highway 37 settlements of Bell II and Bob Quinn Lake officially fall under the jurisdiction of the regional district.

### The Hazeltons

The Village of Hazelton is governed by a mayor and four councillors while the District of New Hazelton has a mayor and six councillors. Each community has a municipal administrator or town manager, the chief civil servant responsible for making recommendation to and implementing the decisions of the council. New Hazelton's operating expenses for the year 2012 amounted to \$1.7 million (D. van Dyk, pers. comm.). Figures were unavailable for Hazelton at the time of writing.

### Town of Smithers

Smithers is governed by a municipal council that consists of a mayor and six councillors (Town of Smithers 2010b). Operation expenses to year end (December 31, 2011) for the town amounted to \$11.9 million (Town of Smithers 2011).

Smithers' Official Community Plan articulates elements of a strategy for economic growth and diversification, including retaining and strengthening the diversity of business activities; retaining provincial government services; provision of support services for the mining sector; forestry and agricultural efforts; encouraging development of secondary manufacturing businesses; and enhancing rail and regional air services (Town of Smithers 2010a).<sup>6</sup>

### City of Terrace

Terrace is governed by a municipal council consisting of a mayor and six councillors. (Terrace n.d.). Operating expenses to December 31, 2011 for the city were \$19.4 million (City of Terrace 2011a).

---

<sup>6</sup> Smithers' Official Community Plan was redrafted and finalized in March 2010 (Town of Smithers 2010a).



In 2002 key objectives under the City's Official Community Plan focused on economic development and diversification.

In 2009 the City held visioning sessions and a public consultation process to update and revise its Official Community Plan and work toward the development of a Sustainability Action Plan. Key objectives adopted under the revised Official Community Plan focused on economic development and diversification, social well-being, local culture, and reducing the City's environmental footprint.

## 6. Socio-economic Overview and Context

## 6. Socio-economic Overview and Context

---

### 6.1 BRITISH COLUMBIA (PROVINCIAL STUDY AREA)

BC's economy has historically relied on natural resource industries. The fur trade and gold rush fuelled the economy in the nineteenth century, while mining and forestry drove the economy throughout the early twentieth century. Over the course of the last few decades, the provincial economy has increasingly diversified. Although natural resource industries remain important in the provincial economy, the balance has shifted to include value-added manufacturing and services. Direct employment in natural resource sectors (forestry, fishing, mining, and oil and gas) declined from 3.3% of the provincial labour force in 1990 to 1.8% in 2011 (BC Stats 2012a). This has had a profound effect on many communities in BC, which in many respects were founded upon and owe their continued existence to resource based industries. At the same time, BC has become increasingly urbanized and both more socially and economically diverse. While the overall provincial population has continued to grow-by over 18% between 1996 and 2011, many regions such as the northwest have experienced substantial population declines in lockstep with dwindling resources, depressed commodity markets, and global competition.

Since the mid-2000s strong international commodity prices, especially for minerals and energy, driven by strong growth in China and elsewhere have rejuvenated parts of BC's resource sector industries. A 7% increase in natural resource sector employment in the province between June 2012 and June 2013 signals the continuation of this trend (Statistics Canada 2013).

#### 6.1.1 Provincial Economic Overview

BC's economy is responsible for 12% of Canada's GDP and it is the conduit and transit point for Canada's growing trade and commerce with Pacific Rim countries. BC's economy is, from an employment standpoint (> 80%) and from a GDP standpoint (> 76%), dominated by the services sector (Table 4.1-2; BC Stats 2011b). Service demand continues to increase as populations in southern BC grow.

The goods sector, despite lower employment numbers and less direct contribution to GDP, provides the economic base upon which much of the service economy, both directly or indirectly, depends. In many parts of the province (i.e., most regions outside of Victoria and the Lower Mainland) resource industries remain vital to local and regional employment and economy.

The goods sector is comprised of primary extractive and harvesting industries (mining, forestry, fishing, and agriculture) and secondary manufacturing industries (construction, utilities, and food/wood/metal product manufacturing/processing). In 2011, the goods sector provided one in five jobs (19.7%) in the province (Table 6.1-1), a significant decrease from the 1970s when the sector accounted for one in three jobs (BC Stats 2012a). The overall proportion of provincial GDP contributed by the goods sector has declined since the 1980s. In 1984, contribution of the goods sector was approximately 31% of provincial GDP; by 2011 the figure had dropped to around 24% (BC Stats 2012a).

Nevertheless, relative to the service sector the goods sector consistently contributes more to the provincial GDP per employee due to higher levels of productivity (e.g., use of machinery and equipment), and a greater average number of hours worked (BC Stats and BC MAELMD 2010). Resource-based industries also continue to provide an important source of employment, especially in the province's northern communities (see Section 4.2; BC Stats and BC MAELMD 2010). Forestry (wood, pulp, and paper) and energy products continue to be the province's main exports, each respectively representing slightly over 30% of total exports in 2011 (BC Stats 2012c). Mining (excluding oil and gas)

contributed \$1.09 billion (0.7% of total GDP) to the provincial GDP in 2011 (BC Stats 2012a).<sup>7</sup> Support activities for mining and oil and gas extraction contributed an additional \$683 million (BC Stats 2012a).<sup>8,9</sup>

**Table 6.1-1. Contribution of Resource Industries to the British Columbia Economy, 2011**

Sector/Industry	Number of People Employed 2011	Percent of Total Employment 2011	BC GDP 2011*	Percent of Total GDP (2011)
Manufacturing	163,900	7.2%	13,562	8.6%
Construction	204,600	8.9%	10,323	6.6%
Mining, Oil and Gas Extraction	24,700	1.1%	4,873	3.1%
Utilities	12,800	0.6%	3,219	2.0%
Forestry and Logging	14,000	0.6%	2,797	1.8%
Agriculture	26,100	1.1%	1,128	0.7%
			(crop and animal production)	
Fishing, Hunting, and Trapping**	1,900 (est.)	0.09%	n/a	n/a
Total (Goods Sector)	447,400	19.7%	37,466	23.8%
Total (Services Sector)	1,827,200	80.3%	120,785	76.6%
Provincial Total (all industries)	2,274,700	100%	157,525	100%

Source: BC Stats (2012a).

\*GDP expressed in millions of chained 2002 dollars<sup>7</sup>

\*\* 2010 data (2011 data unavailable)

Note: 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. GDP sector percentages do not sum exactly to the goods sector total percentage due to the need to disregard several smaller data categories that were aggregated across industries.

Overall, manufacturing in 2011 formed the largest proportion of the GDP of the goods sector (37%), followed by construction (28%). Mining contributed 14% of the goods sector GDP, forestry and logging 8%, while agriculture (including fishing and hunting activities) contributed 4% and utilities 9% (Figure 6.1-1).

In terms of employment, construction and manufacturing provided the majority of 2011 employment in the goods sector. Construction accounted for 46% of jobs in the BC goods sector, followed by manufacturing (37%), including the production of various food, wood, paper, metal, and electronic products (Figure 6.1-1). Provincial employment in agricultural activities amounted to 5.8% of the total goods sector labour force, while mining, oil, and gas extraction made up 5.5% and forestry 3.1%.

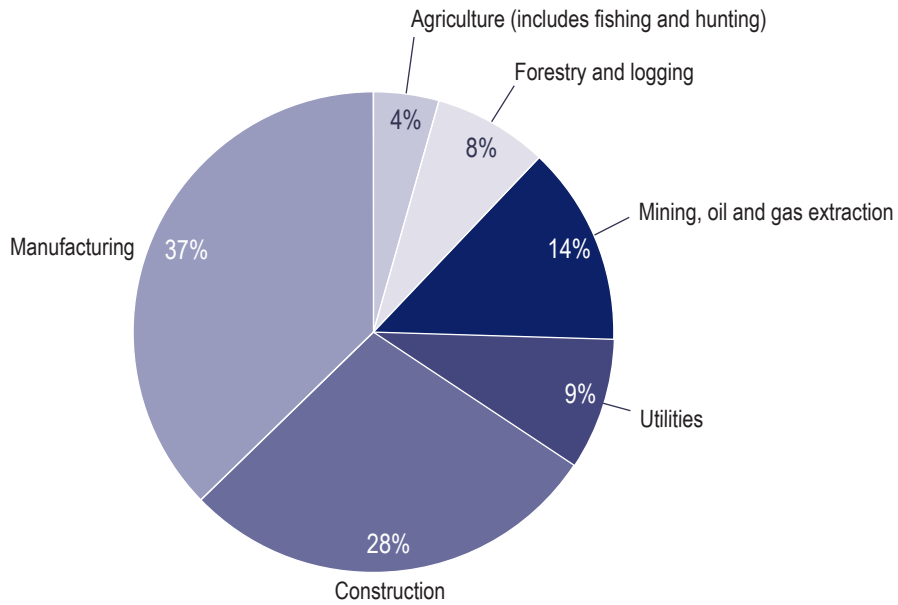
The goods sector is more susceptible to economic cycles than the service sector. As a result, employees in the goods sector are more likely to experience periods of unemployment, with provincial unemployment rates in this sector typically following the province's economic trends (BC Stats and BC MAELMD 2010). Figure 6.1-2, for instance, shows how goods sector unemployment was over double service sector unemployment following the 2008/2009 economic downturn.

<sup>7</sup> Chained 2002 dollars. Chained dollars reflect "real" (i.e., inflation-adjusted) dollar figures computed with 2002 as the base year to allow for estimating rates of growth.

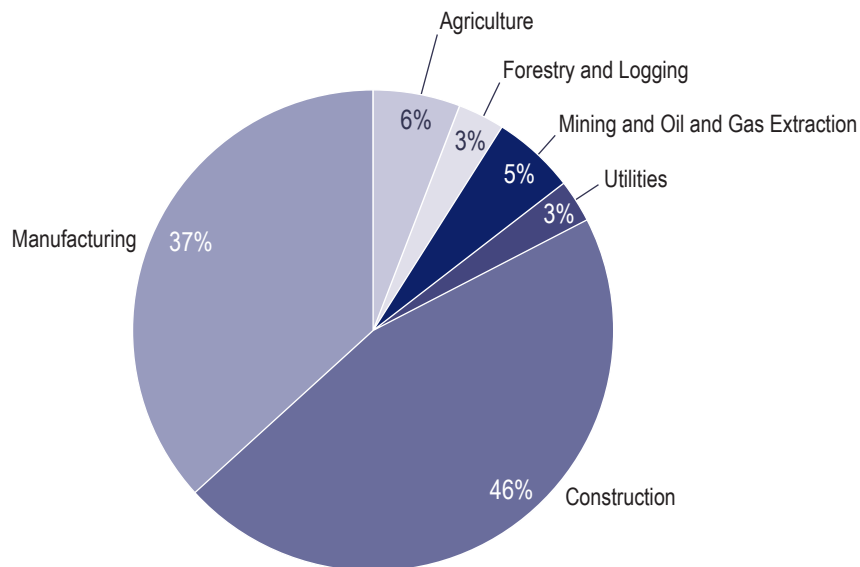
<sup>8</sup> Numbers for mining support activities alone are not available.

<sup>9</sup> Chained 2002 dollars.

### Industry Distribution of BC Goods Sector GDP



### Industry Distribution of BC's Goods Sector Employment



Source: Statistics Canada (CANSIM tables 379-0025 and 379-0026)  
Data last revised: Apr 27, 2012 / Prepared by: BC Stats

Figure 6.1-1

### Unemployment Rate (%)

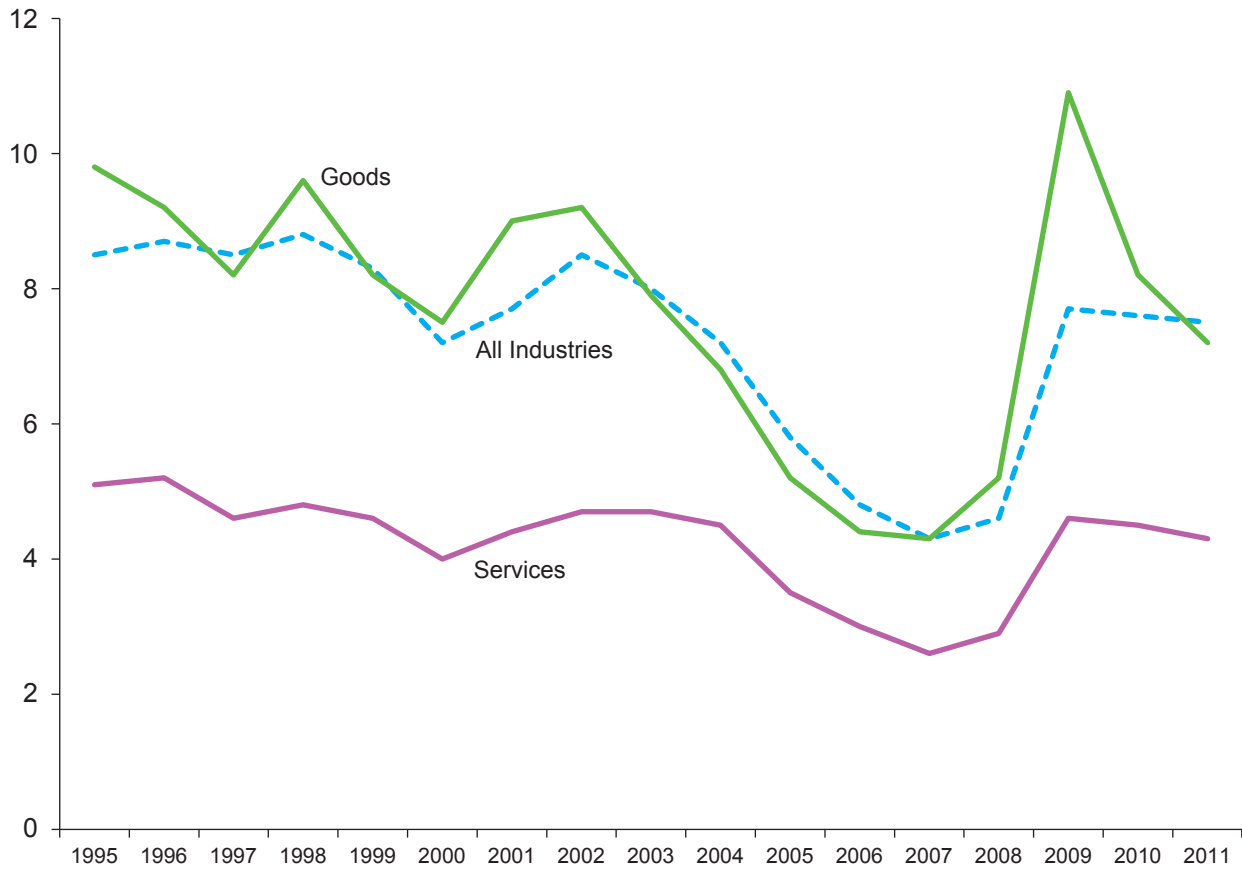


Figure 6.1-2

Mineral exploration, mining, and forestry are vital to local and regional economies that support many rural, northern communities (BC Stats and BC MAELMD 2010). Sections 6.1.2 through 6.1.4 summarize key industries and sectors at the provincial scale that are most relevant to the economy of the RSA.

### 6.1.2 Mineral Exploration and Mine Development in British Columbia

In recent years, both northwest and northeast BC have experienced a significant boom in exploration and mining activities. Strong market demand—particularly from Asia—and surging mineral and coal prices have attracted considerable investment in exploration, helping to position BC as a globally important source of production. Despite the localized and frequently isolated nature of mining and exploration activities, the economic effects are felt throughout the province in direct and indirect job creation, economic spin-offs, and tax revenues (IPGDC and NDIT 2009).

Two recent reviews of the BC mining industry in 2011 and 2012, which included the participation of at least 40 mining companies, highlighted an industry rebound from the global slowdown in 2008/2009 (PricewaterhouseCoopers 2011, 2012):

- Gross mining revenues were \$9.9 billion in 2011, up from \$7.9 billion in 2010, an increase of 25%. This recovery was mainly explained by high mineral prices, in particular coal prices, and increased coal shipments.
- Net income (before taxes) increased from \$2.2 billion in 2009 to \$3.7 billion in 2010, and remained steady at \$3.7 billion in 2011. This represented a reversal from the \$1.0 billion decrease in net income between 2008 and 2009.
- Exploration expenditures among survey participants increased from \$157 million to \$431 million between 2009 and 2011, and increased by a total of 113% between 2010 and 2011. In comparison, the British Columbia Ministry of Energy, Mines and Natural Gas (BC MEMNG) reported a total of \$463 million in mineral exploration expenditures in BC in 2011, up from \$322 million in 2010, an increase of 44% (BC MEMNG 2012b).

The value of BC mineral production (excluding oil and gas) was \$8.6 billion in 2011, an increase of more than 20% over the 2010 value (\$7.1 billion). Coal was the main mineral extracted, representing approximately 66% (\$5.7 billion) of the total value of BC solid mineral production, followed by copper, which accounted for 18% or \$1.5 billion. While the metals sector exhibited a significant slowdown during 2009 and a subsequent rebound in 2010, coal production and exploration remained strong throughout 2009 (BC MEMNG 2012b).

#### Global Market Demand

BC's mining industry is sensitive to global economic demand because of the large proportion of exports to production and because mineral prices are set internationally. The industry suffers when global demand decreases, and mining exploration and activity accelerates when demand for minerals increases (BC Stats 2006). Mineral exploration investments in BC soared over 14-fold from \$32 million to \$463 million between 2001 and 2011 (BC MEMNG 2012a), in large part due to increased demand and commodity prices (PricewaterhouseCoopers 2012). In 2009, however, exploration spending had decreased by more than 50% over the previous year due to the economic downturn. In 2010, mineral exploration spending rebounded to \$322 million, more than double its 2009 value (BC MOFML and MNRO 2011), with spending increasing again in 2011.

Market growth, particularly in Asia, has driven rising mineral prices worldwide. Coal made the most significant contribution to net provincial revenues in 2011, while copper net revenues decreased by

over 4% and molybdenum revenues remained consistent. The price of gold continued to climb in 2009, 2010, and 2011 (PricewaterhouseCoopers 2009, 2011, 2012).

### Tax Revenue Benefits

Federal, provincial, and municipal tax revenue from mining provides economic benefits that are felt outside the area of operations. Tax revenues are used by government to fund social, health, education, and other programs and services for residents nationally, provincially, and within local communities.

The mining industry contributed \$805 million in government payments in 2011, notably more than the \$691 million in 2010 (PricewaterhouseCoopers 2012). Companies operating in BC also pay provincial and federal income taxes. Direct government revenues from mining include a mineral tax levied on mine operators under the *Mineral Tax Act* (1996c), a mineral land tax on freehold mineral rights holders under the *Mineral Land Tax Act* (1996b), and an annual mine health and safety inspection fee (BC Ministry of Finance 2012).

### Mineral Production and Exploration

Mineral production in BC was worth \$8.6 billion in 2011 (BC MEMNG 2012b). At the end of 2011, there were 10 metal, 11 coal, and 32 industrial mineral mines, as well as hundreds of quarries in operation across BC. These numbers increased slightly from 2010 totals. Two mines opened and two mines were under construction in 2011. A total of 211 exploration projects were underway throughout BC in 2011, the same amount as there were in 2010 although fewer than in 2009 (BC MEMNG 2012b).

While no EA certificates for mining projects were issued in 2011, the British Columbia Environmental Assessment Office reported 26 mine projects in the EA process, including three projects in the Application stage and 23 in the pre-Application stage. There are also major expansions and upgrades underway for a number of existing mines (BC MEMNG and BC MFLNRO 2012).

More than half of Canadian exploration companies are based in BC. The rise in commodity prices over the past few years has been mirrored by increased expenditures related to mineral exploration across the province. Exploration expenditures have increased from \$154 million in 2009 to \$463 million in 2011, whereas capital expenditures that same year increased by 135% over 2010, from \$1.25 billion to \$2.94 billion (BC MEMNG 2012b). Projects under construction accounted for almost \$1 billion of the total capital expenditures (PricewaterhouseCoopers 2012).

### Employment

Employment in BC's mining, oil, and gas industries has trended upwards since 1987; however, there were dips in employment in the early 1990s and in the first few years of the new millennium. In 2003, the industry and support activities employed 13,100 people, rising to 25,400 in 2008. In 2009, 24,200 individuals were employed in the industry, 6% fewer from the previous year, most likely due to the recession, with employment rebounding somewhat to 24,700 workers in 2011 (BC Stats 2012a). Approximately 90% of workers in this industry are male (BC Stats 2009e).

Mining, oil, and gas workers earn the highest wages of any industry in BC, with average annual salaries and benefits increasing from \$93,600 in 2005 to \$115,700 in 2011 (PricewaterhouseCoopers 2007, 2009, 2012). The average weekly pay for a mining worker in 2010 was \$1,632, which surpassed the earnings of workers in forestry, manufacturing, finance, and construction by 72, 70, 56, and 53%, respectively. High salaries and benefits reflect the current demand for (and shortages of) skilled and experienced workers in mining, as well as in other industrial and trades industries across the province.



Nationally, the Mining Industry Human Resources Council predicts a mining industry labour shortfall of 60,000 to 90,000 people by 2017 (French 2009).

A significant proportion (33%) of mining industry jobs, including miners, drillers and mining equipment operators, are unique to primary industries. Employment in trades, transportation, and equipment operations is also common (38%). Exploration and manufacturing activity employment (e.g., refining, smelting, and processing) more than doubles the total number of jobs in the industry when also taken into account (BC Stats and BC MAELMD 2010).

### 6.1.3 Forestry

#### Economics

Historically, the forest sector has accounted for more than half the value of provincial exports (BC Stats 2006). In 2011, forest products (wood, pulp, and paper) represented 30.5% (\$10 billion) of the total provincial export value, down from more than 60% during the 1980s (BC Stats 2012c).

The economic circumstances and condition of the province's forest industry fluctuates depending on many factors, including global competition, taxes on lumber to the United States, changes in commodity prices, the Canada-United States exchange rate, capital investments, and returns on capital. In recent years, the industry has faced many challenges, including the downturn in the United States housing market, low prices for forest products, and a significant mountain pine beetle epidemic that attacked forests throughout much of the southern and central interior. For example, 2008 to 2009 provincial forest revenue was \$558 million, down 49% from the previous year (BC MOFR 2010). By 2013 to 2014, the provincial target for forest revenue is \$580 million (BC MFLNRO 2011b).

The forest industry's contribution to provincial GDP—including forestry and logging, wood product manufacturing, and pulp and paper manufacturing—declined from \$9.8 billion (7%) in 2005 to \$6.4 billion (4%) in 2009, but rebounded to \$8.15 billion (5%) in 2011 (BC MFLNRO 2012; BC Stats 2012a). The forestry and logging industry alone decreased from \$3.1 billion<sup>10</sup> in 2004 (2.3% of total provincial GDP) to \$2.2 billion<sup>11</sup> in 2009, or 1.5% of total provincial GDP. Forest industry activity has increased more recently to 1.8% of GDP in 2011, or \$2.8 billion in 2011 (BC Stats 2012a).

Total timber harvest volume showed a recovery in 2010 and 2011, mainly driven by a strong demand from China and an increase in lumber prices due to strong demand and weak supply (BC MFLNRO 2012). Approximately 69.2 million m<sup>3</sup> of timber was scaled in BC during 2011, a nearly 42% increase from the 48.9 million m<sup>3</sup> harvested in 2009 (BC MFLNRO 2011b).

#### Employment Areas and Trends

Despite the long-term decline in the industry and the recent economic downturn, the forest sector remains an important employer in many rural communities. For instance, forestry directly supported jobs in over 100 BC communities in 2009 (BC MOFR 2010). The sector employs many people in occupations unique to primary industry, including heavy machinery operators. Other areas of expertise include natural and applied sciences, trades, transportation, and business management.

Forestry and logging directly employed 14,000 in 2011, about 0.6% of total provincial employment, (BC Stats 2010a, 2012a) and a sharp decline from the 24,200 employed in 2007 (BC Stats 2012a).

<sup>10</sup> chained 2002 dollars

<sup>11</sup> chained 2002 dollars

Wood processing and manufacturing is also a significant employer, providing 39,300 jobs in 2011, a 2.1% increase from the previous year, but a decline of more than a third from 2007 and 45% less than the peak in 1989. Employment in these areas is generally confined to the locations of mills and processing plants. If direct and indirect economic activity is included, BC forest employment in 2011 was 53,340 persons and accounted for almost 12% of the provincial goods sector employment (BC MFLNRO 2012). These trends in forestry sector employment are very much reflected in communities such as the Hazeltons, Smithers and Terrace as well as in Aboriginal communities such as Gitanyow and those of the Gitxsan and Nisga'a Nations (cf Section 6.2.2).

Average income in forest-based industries in 2010 was \$41,000, 12% higher than the \$36,600 in all industries. It was highest in pulp and paper (\$65,800), followed by wood manufacturing (\$48,000), logging (\$46,000), and nature-based tourism (\$18,600; BC MFLNRO 2010). More recent data were not available at the time of writing.

Direct employment for First Nations in the sector increased 60% between 1981 and 2001 (BC MFLNRO). According to the British Columbia Ministry of Forests, Lands and Natural Resource Operations (BC MFLNRO), an increasing number of First Nations also hold forest licences, own forestry companies, and are entering into joint ventures and securing rights to the annual allowable cut (AAC). Over the past two decades, for instance, First Nations-owned companies have increased their timber harvest volume to 10.5% of the AAC (BC MFLNRO 2010). First Nations' increasing interest in forest management has also translated into legislative change. Amendments in 2002 allowed forest tenures to be awarded directly to First Nations and 145 timber and/or revenue interim agreements were signed between 2002 and 2008, signifying access to more than 39 million m<sup>3</sup> of timber and \$230 million in forest revenues (BC MOFR 2006; BC MFLNRO 2010). According to the most recent report on the state of BC's forests, issued in 2010, approximately 20 First Nations currently have or are negotiating Community Forest Agreements in order to manage the recreational, wildlife, watershed, and cultural heritage of resources (BC MFLNRO 2010).

### Mountain Pine Beetle

The mountain pine beetle infestation in BC has destroyed approximately 620 million m<sup>3</sup> of lodgepole pine in an area four times the size of Vancouver Island (BC MOFR 2010). AACs for many timber supply areas were temporarily increased so that the industry could get maximum value from the affected timber. Between 2000 and 2010, the AAC was increased from approximately 18 million m<sup>3</sup> to 88 million m<sup>3</sup> per year so that timber could be harvested that would otherwise have been commercially unusable (BC MFLNRO 2010).

In 2010, the BC MFLNRO estimated an AAC of 73 million m<sup>3</sup> in 2014, with further decreases over the longer term until 2060, to allow forests to regenerate (BC MFLNRO 2010). This is expected to have long-term implications for direct and indirect employment in the sector.

## **6.1.4 Other Industries**

### Agriculture

In 2011, over 26,000 people worked in agriculture, amounting to 1.1% of the province's total employment. Crop and animal production accounted for \$1.1 billion of BC's GDP in 2011 (BC Stats 2012a). Northern regions such as the RDBN and the Peace River Regional District are also important actors (Rescan 2009). Agricultural activity is also present, albeit to a nominal extent, within the southern portion of the RDKS (Hallin 1999).

### Fishing

Fishing, hunting, and trapping collectively represented less than 0.1% of total employment in BC in 2011 (BC Stats 2012a). Nevertheless, fishing in particular remains a major economic activity, predominantly for communities around Prince Rupert and northern Vancouver Island. Although fishing is more prominent in northern waters, the industry has centralized over time in Vancouver, Richmond, and Prince Rupert as advances in harvesting, canning, and transportation eliminated the need for facilities to be located close to fishing grounds. Fish hatchery and farming activities have also expanded over the last few decades throughout coastal BC (BC Salmon Farmers Association 2010). For Aboriginal communities the economic importance of fisheries remains tightly coupled with social and cultural importance.

### Tourism

Tourism is primarily viewed as a service sector industry; however, tourism often includes goods sector activities such as fishing and hunting. The tourism sector, which also includes food, accommodation, transportation, and retail trade, employs approximately 5.6% of the provincial labour force (127,000 people) with over 4% of provincial GDP attributed to the sector (BC Stats 2011e, 2012a). Tourism-related activity is not evenly distributed throughout the province and is strongly centred in southern BC, with over half of all room revenues generated in the Vancouver, Coast, and Mountains regions (Tourism BC 2011).

BC's tourism sector grew and outperformed the rest of the economy between 2004 and 2008 (BC Stats 2009g). After a significant downturn in 2009, when the tourism sector shrank for the first time since 2002, the sector expanded 4.3% in 2010. This increase was slightly higher than the average for all BC industries, making 2010 the best year for tourism sector growth since 2005 (BC Stats 2011e).

As a sub-set of tourism, approximately \$116 million of economic activity is generated yearly by the BC guide outfitting industry (GOABC n.d.). More than 2,000 people are directly employed in the industry to serve the needs of over 5,000 non-resident hunters. These hunters typically spend more per day per capita than any other visitor to the province. Guide outfitting further contributes to government revenue through licence and tag fees, surcharges, and royalties amounting to \$2 million to \$3 million each year, in addition to millions of dollars in other taxes. Between 1981 and 2009, license surcharge dollars from guides, hunters, trappers, and anglers have raised over \$100 million in BC (GOABC 2009).

To further promote the industry, the Government of BC developed a Tourism Action Plan which aims to invest in resort and hotel developments, improvements in infrastructure (particularly access infrastructure), and increase direct flights in key Asian and European markets. The Ministry of Tourism, Culture, and the Arts (currently named the Ministry of Jobs, Tourism and Skills Training) estimated that 50,000 new employees will need to be recruited for the tourism industry by 2015 to accommodate industry growth targets (BC MTCA 2009).

## **6.2 REGIONAL STUDY AREA**

Economic development in northwest BC, including the RSA, stems largely from development of the area's abundant natural resources. Forestry, fisheries, and mining all have rich histories in the region. While in recent decades forestry and fishing have waned, mining has enjoyed a prolonged resurgence since the 1980s. Mining has become a strong component of attempts to rejuvenate the economy and contemporary socio-economic planning (BC ILMB 2000, 2004), although infrastructure limitations, isolated communities, small populations, difficult winter weather, and long distances continue to be important constraints. Communities within the RSA are also susceptible to changes in global commodity

markets. Stewart and Cassiar are both examples of communities whose fortunes have been closely tied to the expansion and contraction of the global market for minerals (Daum 2010).<sup>12</sup>

Notwithstanding the changes and fluctuations in resource industries in northwest BC, they do remain important employers and the economic lifeblood of many of the communities within the RSA. Nevertheless, primary industry is increasingly complimented by tourism, especially tourism markets such as guide outfitting, hunting, fishing, heli-skiing, and backcountry recreation which focus on the outdoor recreation and wilderness opportunities that abound in the region. According to Horne (2009), income sources within the RSA also rely heavily on the public sector. A separate Institute of Chartered Accountants of BC 2009 report found that dependency on the social safety net throughout the RSA was the highest among all provincial regions (ICABC 2009).

The regional economy has benefited from stronger commodity prices in recent years. The natural resource industry's expansion into Asia, as well as investment in infrastructure and utilities, has precipitated unprecedented investment in BC's northwest. There is currently a combined value of roughly \$8.6 billion worth of projects permitted or under construction in the RSA (see Table 6.2-1) (ICABC 2013). Completion of the NTL and the Forest Kerr Hydroelectric Project are anticipated to stimulate additional investment and development in the region. The continued expansion of the Prince Rupert Port facilities will also promote increased regional trading activity.

Residents in Aboriginal communities are also involved in resource activities (including forestry and logging, mining, and mineral exploration), as well as construction and tourism. Public administration is a major employer within these communities. Aboriginal residents also pursue a wide range of sustenance activities (including hunting and fishing) that contribute economically, socially, and culturally to their families and communities (BC ILMB 2004).

Sections 6.2.1 through 6.2.3 provide a general overview of the key regional economic sectors and their relative importance to local and regional economies in the RSA.

### **6.2.1 Mining in Northwest British Columbia: Past, Present, and Proposed Projects**

Until recently, mining supplied an estimated 30% of jobs within the communities along Hwy 37 (Bridges and Robinson 2005). The larger population centres of Smithers and Terrace have also provided the mining industry with an available labour force as well as a service and supplies base. Mining continues to be an important source of employment, although this activity has been concentrated in mineral exploration rather than development and operation over the last several years (BC MEMNG 2012b).

The Huckleberry Mine is currently the only operating mine in the RSA. It has recently extended its mine life from 2014 to 2021 (Imperial Metals Corp. 2012). The Eskay Creek and Kemess South mines, both important regional employers, closed in 2008 and 2010, respectively (BC MEMNG and BC MFLNRO 2012; MABC 2012). However, mineral exploration in the RSA has shown substantial growth in recent years, reflecting the trend of global mineral markets. The new owner of the Kemess Mine property, AuRico Gold Inc., is currently exploring the Kemess Underground Project, approximately 5.5 km north of the previous project (AuRico Gold Inc. 2012).

According to the provincial government, the northwest quadrant of BC, including the RSA and adjacent portions of the Stikine Region and areas south of the RDKS, had 89 major, active exploration projects

---

<sup>12</sup> Cassiar was built by a mining company to house employees of the Cassiar Mine. The development of this mine brought growth in the local and regional economy, including Dease Lake, Good Hope Lake, and the Tahltan and Kaska First Nations. Many jobs and business contracts were lost when the mine and town closed.

that spent a total of \$220 million on mineral exploration in 2011 (BC MEMNG 2012b). A number of small-scale operators, including jade and placer gold operations, are also present. The NTL is being built to supply anticipated increases in demand for electrical power, particularly from the mining sector may enable much of the proposed activity to meet their power requirements. Table 6.2-1 summarizes past, present, and future resource and related infrastructure development projects in the region.

**Table 6.2-1. Summary of Past, Present, and Proposed Industrial and Energy Projects in Northwest British Columbia**

Project	Type	Location	Duration	Comments
Cassiar mine	Asbestos	Near community of Good Hope Lake	1946-1992	Supported a community of 2,000 residents
Golden Bear mine	Gold	150 km west of Dease Lake	1990-1993; 1997-2001	Avg. about 70 people per year (seasonally), peak of 120, largely Tahltan employees
Snip mine	Gold/ silver	North of Stewart	1991-1999	Approx. 130 workers during operation.
Silback Premier mine	Gold/ silver		1919-1953;	Provided economic basis for Stewart; employed over 800 people at its peak; one of the richest gold mines in the world; paid for its capital cost within the first two years of production; temporarily reactivated in 1989. The Premier mill has also been used to process ore from other mines in the region
Granduc mine	Copper	Approx. 40 km north of Stewart	1971-1984	Further exploration 2005-2008, looking to get to EA and Feasibility stage by 2013.
Eskay Creek mine	Gold/ silver	approx. 20km NW of Brucejack Lake	1994-2008	Approx. 350 workers during operation, including many Tahltan and residents of Smithers, Terrace, and Hazelton. Ongoing exploration for additional mineral reserves in adjacent areas.
Kemess South mine	Gold/ copper		1998-2010	Approx. 400 employees, including approx. 70 Aboriginal workers. Feasibility study underway for potential additional development (up to 12 more years of mine life)
Huckleberry mine	Copper/molybdenum	Approx. 123 km southwest of Houston	1997-2021	Approx. 260 employees, almost 80% of whom live in Bulkley Valley communities incl. Houston, Smithers, Telkwa, Granisle, and Burns Lake. Mine life recently extended from 2014 to 2021.
Red Chris mine		Approx. 20 km SE of Iskut, just west of Klappan River	2014 (est.) - 28 years	EA certificate issued in 2003. Operating permits pending. Expected construction employment +/- 500; operations employment +/- 300
Northwest Transmission Line	Electrical power transmission line	Skeena Substation (Terrace) to new substation near Bob Quinn Lake		335 km, 287 kV capacity, provides critical energy infrastructure for northwest BC resource development. It is currently under construction with completion anticipated in 2014. Local First Nations and communities working on construction in various capacities (e.g. right-of-way clearing).

(continued)

**Table 6.2-1. Summary of Past, Present, and Proposed Industrial and Energy Projects in Northwest British Columbia (continued)**

Project	Type	Location	Duration	Comments
Galore Creek mine	Copper/ gold	65 km south of Telegraph Creek	18 years	Approx. 550 employees, plus an additional 170 at separate mill site in adjacent valley. EA certificate issued but project on hold pending design changes
Kutcho Project	Copper/ zinc	100 km east of Dease Lake	12 years	Currently in the pre-Application stage of the BC EA process
Schaft Creek Project	Copper-gold-molybdenum-silver	60 km southwest of Telegraph Creek	23 years	Currently in the pre-Application stage of the BC EA process. Proponent has signed training/ employment/ contracting agreements with the Tahltan Nation. Approx. 750 employees projected at the peak of operations, with approx. 4,000 person-years of employment over the life of the project
Arctos Anthracite Coal Project (formerly Mt. Klappan Coal Project)	Metalurgical coal	60 km southeast of Iskut	20 years	Currently in the pre-Application stage of the BC EA process
Kitsault Project	Molybdenum	Approx. 40 km NW of Gitlaxt'aamiks; near Alice Arm	16 years	EA certificate issued in March 2013. Construction workforce of up to 700 workers over two years and an operations workforce of approximately 300. It is a re-development of a molybdenum mine that operated in the late 1970s and early 1980s.
KSM Project	Gold, copper, silver, molybdenum	Approx. 65km north of Stewart	5 years construction 52 years operation	Approx. 1,800 onsite construction jobs. During operations expect over 1,000 onsite jobs plus additional +/- 1,800 indirect jobs in BC.
Forest Kerr Project	Run-of-river 195 MW hydro-electric	On the Iskut River, approx. 45 km NW of Brucejack Lake	4 years construction	Construction of the approximately \$700 million project began in 2011, and is anticipated to create up to 400 jobs.
Mclymont Creek Hydroelectric Project	Run-of-river 66 MW hydro-electric		3 years construction	Anticipated to be in operation in late 2015. Will use Forest-Kerr transmission system to connect to NTL.
Long Lake Hydro Project	Run-of-river 31 MW hydro-electric	Near Stewart	3 years construction	Construction began in 2010, peak employment of approx. 160.
Kitimat Modernization Project	Aluminum smelter expansion	Kitimat	2 year construction	\$3.3 billion modernization of Kitimat aluminum smelter; began construction in 2012. Modernization of 57-year old facility will double capacity and reducing GHG emissions. Construction jobs, approx. 2,500 jobs over 2 yrs. Approx. 1,000 jobs during operations

(continued)

**Table 6.2-1. Summary of Past, Present, and Proposed Industrial and Energy Projects in Northwest British Columbia (completed)**

Project	Type	Location	Duration	Comments
Kitimat LNG Terminal	Liquid natural gas terminal	Kitimat	???	EA certificate issues in 2006. Proposed plant capacity is 700 million cubic feet of natural gas per day. Capital cost projected at approx. \$3 billion.
Pacific Trail Pipeline	Pipeline	463 km between Summit Lake in north-central BC and Kitimat terminal	Construction began 2012, ongoing	EA certificate issued in 2008. Capital cost approx. \$1.3 billion.. Project in conjunction with Kitimat LNG project.

Source: Rescan (2013c).

## 6.2.2 Forestry

### 6.2.2.1 Economic Context

Forestry data for the RSA is unavailable: the provincial government aggregates the information into the North Coast and Nechako Development Region<sup>13</sup>. In this region, 1,500 people were employed in 2011 in forestry (logging and support) activities (BC Stats 2012b). Employment in the industry has decreased 60% since a recent peak of 3,800 in 2000. Employment decreases began in the sector due to market pressures and trade disputes with the United States. Companies reduced their non-skilled labour force in order to remain in operation and competitive. As lay-offs ensued, communities could no longer rely on the forestry industry to provide employment to large numbers of mill workers (BC MFLNRO 2010). In conjunction with the provincial trend, total timber harvest volume showed a recovery in 2010 and 2011; however, large employment numbers have not returned due to the loss of wood processing and manufacturing facilities.

### 6.2.2.2 Forest Vulnerability Index

Economic dependency on the forestry industry varies throughout the northwest. The BC government uses a Forest Vulnerability Index, ranging from 0 to 100, which combines communities' economic diversity with dependence on the forestry industry. A high Forest Vulnerability Index value implies that if forestry activity declines the area will experience greater economic difficulties. With respect to the RSA, the combined average Forest Vulnerability Index value is 28.8.

Table 6.2-2 shows that the Smithers-Houston region, followed by Hazelton (which includes the Skii km Lax Ha and Gitxsan communities), depends most heavily on forestry. Kitimat-Terrace relies on forestry to a lesser degree, while Stewart has the lowest reliance on forestry.

### 6.2.2.3 Forest Industry Challenges

Forestry in the northwest has been declining until recently, especially over the last decade. A combination of high operating costs with a low-value timber profile resulted in repeated economic failure in BC's northwest (City of Terrace Forestry Task Force 2009). While some of the forest industry's problems are province-wide (e.g., high operating costs, recent issues surrounding the United States softwood quota, and the global recession), other problems are specific to the region. For example, in the northwest the main challenge is the wood: 50 to 65% of the timber is lower-valued

<sup>13</sup> The North Coast and Nechako Development Region includes the RDKS, the RDBN, Stikine Region and the Skeena Queen Charlotte Regional District. Data from this region overlaps and extends beyond the KSM Project's economic baseline RSA.

pulp wood (City of Terrace Forestry Task Force 2009). In contrast, the mountain pine beetle, which attacks lodgepole pine, has not impacted the northwest, as the region’s trees are mostly hemlock, balsam, spruce, and cedar (BC MOFR 2007).

**Table 6.2-2. Regional Forest Vulnerability Indices, 2006**

Region	Forest Vulnerability Index
Stewart	7
Kitimat - Terrace	20
Hazelton	38
Smithers - Houston	50
Regional average	28.8

Source: BC Stats (2009e).

The implications of the industry’s economic demise have resulted in business closures and extensive job losses that changed the population and demographics of the RSA over the last 20 years. The region was previously home to nine sawmills, two operating pulp mills, and a number of re-manufacturing plants. In 2000, there was a significant loss of direct and indirect jobs when Skeena Cellulose, the largest employer in the region, closed (City of Terrace Forestry Task Force 2009). In 2010, West Fraser closed their Eurocan pulp mill based in Kitimat, resulting in the loss of 500 direct jobs (West Fraser Timber Co. Ltd. 2009). Pacific Inland Resources, located in Smithers and owned by West Fraser, is the only remaining lumber mill within the RSA (West Fraser Timber Co. Ltd. 2012).

**6.2.2.4 Revitalization**

The City of Terrace Forestry Task Force noted in 2009 that policy efforts should focus on researching alternatives for pulp log uses and creating a strategy to market the northwest’s dominant “fibre logs” in order to increase their value (City of Terrace Forestry Task Force 2009). Since 2010, logging activities have begun to pick-up in BC, including operations in the RSA, although activity remains far below historic levels (P. Weeber and B. Faasnidge, pers. comm.). Timber (raw logs) from the RDKS and Bulkley Valley is being trucked to the coast for overseas shipment. Further, with available regional timber not committed to local manufacturing plants, a coalition of tenure holders recently formed the Northwest BC Forest Coalition to spearhead interest with alternative uses of wood such as bio-energy, bio-coal and pellets, and new manufactured products (Weeber and Faasnidge, pers. comm.; NWBC Forest Coalition 2011).

**6.2.3 Tourism and Recreation**

The provincial government compiles tourism information for the North Coast Development Region which encompasses most of the RSA.<sup>14</sup> This region accounts for 13.5% of the province’s land area yet comprises only 1% of the province’s population (Stroemer 2010). The region offers tourism opportunities that reflect the remote and natural wilderness of the area, such as:

- Aboriginal arts and culture;
- fresh and saltwater fishing;
- canoeing, kayaking, white water rafting;

---

<sup>14</sup> The North Coast Development Region is an Aggregation of the Regional Districts of Kitimat-Stikine and Skeen-Queen Charlotte. The part of the RSA not included is Electoral Area “A” of RDBN.



- o skiing, snowmobiling, and other snow sports; and
- o cruise ship tours.

There were over 2,000 nature-based tourism businesses in BC in 2005, the last year for which this information was released (Tourism BC 2005). Out of these, 180 (18%) were based, or had operations in northern BC. In 2006, the region boasted 47% of the province's guide outfitting operations, 29% of the freshwater fishing lodges, and 18% of land-based summer businesses (cycling tours, all-terrain vehicle experiences, bird-watching, horseback riding, etc.). A breakdown of regional nature-based tourism businesses as compared to the province can be found in Table 6.2-3.

**Table 6.2-3. Commercial Nature-based Tourism Businesses - Northern British Columbia, 2005**

Business Type/Category	Northern BC (# of Businesses)	BC Total (# of Businesses)	% of BC Total
Lodge-based (destination lodges, guest ranches, guide outfitters)	140	402	35%
Freshwater-based (fishing; river rafting, kayaking/canoeing)	93	380	24%
Marine-based (fishing, sea kayaking, boat charters, scuba, marine wildlife viewing, sailing/cruising)	85	828	10%
Land-based (mountain biking, heli-skiing, various summer and/or winter activities)	83	583	14%
<b>Total</b>	<b>401</b>	<b>2,193</b>	<b>18%</b>

Source: Tourism BC (2005).

## 6.3 LOCAL STUDY AREA COMMUNITIES

### 6.3.1 Dease Lake and the Tahltan Nation Communities

The people of the Tahltan Nation reside primarily in several reserve communities and the unincorporated community of Dease Lake. Dease Lake Unincorporated is located along Hwy 37 (also known as the Stewart-Cassiar Highway) about 488 km north of the junction with Hwy 16 and about 234 km south of the Yukon border. The reserve community of Dease Lake IR 9 is four kilometres north of the Town of Dease Lake.

The Tahltan Nation includes the Iskut First Nation and the Tahltan Band. The Tahltan Nation has 12 reserves within their traditional territory (AANDC 2012c). The Iskut First Nation is based on Iskut 1 located about 83 kilometres south of Dease Lake on Hwy 37. Iskut 1 is adjacent to the settlement of Eddontennajon. The main reserve community of the Tahltan Band is located at Telegraph Creek, situated about 108 km southwest of Dease Lake on the bank of the Stikine River (Figure 4.1-1).<sup>15</sup> The Tahltan Central Council (TCC) is based on Dease Lake 9. Dease Lake provides services for the Tahltan Nation and surrounding area, including highway and tourism services, mainly during the summer. Offices for Service BC, Min. of Children and Families, BC Parks, Min. of Transportation and Infrastructure, Min. of Forest, Lands, and Natural Resource Operations, BC Ambulance, and the school board headquarters for the Stikine School District #87 are also located in Dease Lake. Other government ministries, agencies or services have part-time and/or seasonal staff.

Dease Lake is dependent on the resource base of the region. Mining and mineral exploration is the primary industry in the area, although guide-outfitting and wilderness tourism also play an important

<sup>15</sup> There are in fact several Tahltan Indian Reserves located in the vicinity of Telegraph Creek, these are listed in Table 7.2-1.

role (DeaseLake.net 2006). A number of other businesses have developed to support resource industries in the region, including air transportation, accommodation and equipment supply to remote forestry and mining operators. Construction services, including the base office for the Tahltan Nation Development Corporation (TNDC), are also prevalent. Forestry is very limited. Following the transfer of harvest licensing to BC Timber Sales in 2003, the level of activity in the area sharply declined.

The area has been economically depressed in recent years. Contributing factors include the relocation of some provincial government services to Smithers, the downturn in the forest industry, and job losses associated with the closure of the Golden Bear, Cassiar, Eskay Creek, and Granduc mines.

Tahltan communities rely primarily on the public sector and natural resource industries for economic opportunities and employment. The primary employer is the Band office, including administration, health, and social services, as well as the TCC, followed by mining and mineral exploration (SNDS 2007; Statistics Canada 2007a).

Mining has been an important source of employment for members of the Tahltan Nation who have worked in various capacities at the former Eskay Creek, Cassiar, and Golden Bear mines. Tahltan also find employment during exploration and in conjunction with environmental impacts assessment work. The Galore Creek and Red Chris projects, should they proceed, would likely provide considerable employment and/or contracting opportunities for numerous Tahltan members.

### 6.3.2 Stewart

The District of Stewart is located on the west coast of BC, at the head of Portland Canal and the western terminus of Hwy 37A (see Figure 4.1-1). Stewart was established in 1898 as a mining town, during the heyday of the Klondike gold rush. The port at Stewart is an important transit point for shipping concentrate from various projects in northwest BC and the Yukon Territory.

Stewart has been economically depressed in recent years and many residents have left the area in search of work. The local economy is tightly coupled to resource industry cycles in the region and is one of the least diversified in the province (Horne 2009). Proximity to Alaska, its coastal location, and ample tourism and recreation opportunities are marketed to help grow the tourism sector and bolster the local economy (A. Danuser and S. McFee, pers. comm.) Nevertheless, Stewart's history is punctuated by cycles of economic boom and bust, most often tied to the immediate fortunes of the mining industry.

Mining has played a role in Stewart's economy since it was settled and continues to do so today. The Huckleberry Mine supports employment within the community, as it trucks ore concentrate from its mill near Houston BC, to the Port of Stewart. The Eskay Creek Mine was also an important economic contributor and employer until its closure in April 2008 (Rescan 2009). Other mines in the area that have contributed to the socio-economic well-being of Stewart include the Premier, Granduc, Jumbo, Red Cliff, and Porter-Idaho projects (StewartBC.com 2011).

In recent years, mineral exploration in the Stewart area has supported the establishment of a number of local drilling companies, expediting firms (such as Granmac Services and Seaport Limousine) and heavy equipment rentals.

In terms of forestry and logging, the early 1990s saw up to 500 truck-loads of logs unloading their cargo on a daily basis near port facilities (E. Drew, pers. comm.). Today, Stewart still serves as an export centre for raw logs, albeit to a nominal extent.

Community retail services and facilities in Stewart include a restaurant, gas station, gift shop, bakery, general store, and hotels. A bank and hardware store closed in 2009, although the latter has subsequently reopened. Loss of services is a major concern for the community (A. Danuser and S. McFee, pers. comm.). A Service BC branch handles bill payments, licence and permitting, and other day-to-day transactions.

In 2010, construction began on the Long Lake Hydro Project following the award of an energy purchase agreement by BC Hydro (Regional Power 2012). The estimated \$90 million to \$100 million project was anticipated to employ up to 160 people at peak and be completed by summer 2013. The project will have an installed capacity of 31 MW, and power will be distributed via a new 10-km 138 kV transmission line which will connect to the BC Hydro grid and provide additional energy resources for communities and potential resource development projects (NDIT 2012; Regional Power 2012).

Stewart Bulk Terminals, a privately owned facility, serves as the shipment facility for ore concentrate to international destinations. The Port of Stewart is the northernmost ice-free port in North America, with terminals that have the capacity to berth large international freighters up to 50,000 deadweight tonnage (District of Stewart n.d.). Facilities provide for both shallow and deep water barges and include two storage facilities and an average loading rate of 700 to 800 tonnes/hour. The Huckleberry Mine and Wolverine Mine in the Yukon ship their concentrate from the Port of Stewart. It is also the proposed shipping point for a number of proposed mining projects, including the Galore Creek, Red Chris, Kutcho, and KSM projects (Stewart-Hyder ICC. 2008).

In July 2012, Stewart World Port completed a feasibility study to build a new port facility at the former Cassiar (Arrow) Dock owned by the District of Stewart (Stewart World Port 2012). Stewart World Port would provide some competition for Stewart Bulk Terminals and provide added capacity to help meet the shipping needs of the anticipated expansion of mining in northwest BC.

Although the community's economy has suffered in recent years, a turnaround is potentially underway with the expansion of infrastructure such as the NTL and Long Lake Hydro projects, the increase in mineral exploration and potential development, and local developments such as the anticipated upgrades to Stewart Bulk Terminals and proposed development of Stewart World Port.

### 6.3.3 Nisga'a Nation

Nisga'a Lands encompass about 2,000 km<sup>2</sup> around the estuary and lower reaches of the Nass River. Nisga'a villages fall along the Nass flood plain, or in the case of Gingolx, at the mouth of the Nass River. The villages are connected by road to Hwy 113, the Nisga'a Highway which links Nisga'a Lands to Terrace about 100 km to the south. The Nisga'a NFA (NLG, Province of BC, and Government of Canada 1998) came into effect as of May 2000 under the *Constitution Act* (1982).

The Nisga'a economy of the late twentieth century was, like most of northwest BC, tied to resource-based industries, especially forestry and commercial fishing. In recent decades the predominance of forestry and fishing has declined substantially. While tourism, construction, and mining related activities have filled some of the vacuum, the current Nisga'a economy remains especially dependent on the public sector. Unemployment is persistently high and job opportunities scarce, causing many Nisga'a citizens to seek employment in regional centres such as Terrace and Prince Rupert. Within Nisga'a Lands hunting, fishing, and non-timber forest products such as berries are an important component of household livelihoods, and thus help to support the local economy and community well-being. Currently, infrastructure and resource development projects appear to present some potential opportunity for contemporary and future economic development. Several Nisga'a have found employment with construction crews for the NTL project. The proposed Kitsault mine, which received

its environmental certificate in late 2012, is relatively close to Nisga'a villages may also provide employment opportunities.

#### 6.3.4 The Hazeltons and Skii km Lax Ha, Gitxsan, and Gitanyow First Nations

The Hazeltons are located approximately 140 km northeast of Terrace and 60 km northwest of Smithers on the Yellowhead Hwy 16 at the point where Bulkley River flows into the Skeena. The Hazelton area has been home to Gitxsan, Gitanyow, Skii km Lax Ha, and Wetsuwet'en First Nations for more than 7,000 years (Village of Hazelton 2008). The Skeena River served as an ancient trade route, and from 1886 to 1913 Hazelton was an upriver terminus for a fleet of sternwheelers that brought people and supplies to nearby mines, farms, and settlements. A railway came to the area in 1914, bringing thousands of construction workers and homesteaders. The Hazelton area subsequently stabilized into a rural region of small Aboriginal and pioneer or settler communities.

The Village of Hazelton and the Gitanmaax reserve are adjacent to each other and in many respects form a single geographic community. New Hazelton, Kispiox IR, and Glen Vowell IR are all within about a ten km radius (Figure 4.1-1). The remaining Gitxsan reserve communities of Gitwanga, Gitsegukla and Gitanyow are located to the west along highways 16 and 37.

Historically the Hazelton area, including First Nation communities, was reliant on the forestry industry. The area has suffered as unemployment has increased steadily with the decline of the forestry sector and the closure of several mills in the area since the late 1990s (Brucejack Project Research Program 2012c). High unemployment has led to increasing social problems, depopulation and an increasing reliance the transfer of federal funds to support local economies (P. Weeber and B. Faasnidge, pers. comm.).

Recently, Hazelton and New Hazelton have increased their focus on tourism; however, it remains a relatively minor economic driver as the season is short (typically about two and half months) and appropriate accommodation is limited (P. Weeber and B. Faasnidge, pers. comm.). Wilderness recreation, scenic beauty, and Aboriginal culture are important draws for tourists; however, the area is perhaps best known as a sports fishing destination, mainly for catching salmon and steelhead.

Services in the area (e.g., Old Hazelton) are limited and most goods are purchased elsewhere (A. Maitland and B. Smith, pers. comm.). The area has lost a major grocery store, so food choices are limited and expensive. For the most part it is easier (and cheaper) for residents to travel to (Smithers which is less than an hour drive away) or to Terrace to take advantage of large box stores and wholesalers.

There is a desire to improve economic development in the area while maintaining the local lifestyle. Many locals are reportedly enthusiastic about the contribution that mining could provide to the area (A. Maitland and B. Smith, pers. comm.). There is also a sense that mine development in the region would not only provide jobs and training opportunities, but could encourage the province to invest more in northern communities in general (Brucejack Project Research Program 2012c).

Members of the Skii km Lax Ha reside in the Village of Hazelton and on the Gitanmaax IR. The majority are either school age or retired. Currently several working age members are actively engaged in mine exploration and mining related environmental assessment in a variety of supply and service roles (Brucejack Project Research Program 2013).

The Gitxsan Nation includes the five reserve communities of Gitwangak, Gitsegukla, Gitanmaax, Glen Vowell, and Kispiox, although many Gitxsan members also live in Hazelton and New Hazelton or elsewhere in BC (Gitxsan Chiefs' Office 2010). The Gitxsan Hereditary Chiefs Office and the Gitxsan Treaty Society are both based in Hazelton. Many aspects of the Gitxsan socio-economic context

especially that of Gitanmaax, are reflective of the close interdependency of the Gitxsan and Hazelton communities. Where forestry was once dominant, the area continues to find its way through a protracted period of transition and change. Prospects for local socio-economic well-being for the Hazeltons, Gitxsan, and Skii km Lax Ha communities are regarded locally as heavily dependent upon federal transfers to First Nations, as well as on hopes for expanded tourism and the opportunities presented by mine exploration and a growing mining sector (Brucejack Project Research Program 2012c).

The economic base of Gitanyow First Nation is not dissimilar to that of the Gitxsan First Nation communities. As with other First Nations communities, federal transfers are an important pillar of the local economy as Band administration and services are often one of the few local sources of employment and income. Traditional subsistence activities such as hunting, trapping, and fishing are often as important socio-economically as they are culturally. Fisheries located along the Kitwanga and Nass Rivers, as well as the Gitanyow and Meziadin Lakes areas, are monitored by the Gitanyow Fisheries Authority (GFA 2010; Skeena Fisheries Commission n.d.) and contribute to local socio-economic well-being through both food and commercial harvests.

Forestry was until recently, the main resource industry, but economic impacts following the closing of the Kitwanga lumber mill in the Gitxsan community of Gitwangak was a particularly strong blow to both communities (GHCO 2006). Although the mill was purchased by Pacific Bio-Energy in September 2009, and work was underway for developing a wood pellet processing facility (Pacific BioEnergy 2012), the mill closed again indefinitely in October 2011 due to softened demand and low prices which made the project uneconomical (BC MFLNRO 2011a).

The Gitanyow First Nation are reaping some construction employment benefit from regional resource and infrastructure development as the community recently signed an agreement for employment, contracting, and other economic opportunities related to the construction of the NTL (BC Hydro 2012a).

### **6.3.5 Smithers**

Smithers is located within Electoral Area “A” of the RDBN along Hwy 16, approximately halfway between Prince Rupert and Prince George (Figure 4.1-1). Smithers is the regional service centre for the Bulkley Valley given its strategic location along the routes of Hwy 16 and the Canadian National Railway. Smithers provides a range of commercial, business, administrative, recreational, and cultural services (Town of Smithers 2010b). There has been increased economic diversification over recent years, although the town continues to be dominated by the forestry and public service sectors. There are a number of provincial government offices in Smithers including the ministries of Energy and Mines; Environment; Justice; and Forests, Lands and Natural Resource Operations, which give the town a competitive edge in mineral exploration and development support services over other regional centres such as Terrace (Brucejack Project Research Program 2012a).

Smithers’ economy was historically built on the primary resources sectors. Forestry continues to be the leading resource sector, followed by mining and agriculture. The town is currently home to the only remaining saw mill within the RSA. Many employees of the Huckleberry Mine and formerly of the Eskay Creek and Kemess mines reside in Smithers. The town is also an important staging point for charter services to mines and mineral exploration sites throughout northwest BC. In 2007, mineral exploration in northwest BC is estimated to have generated \$37 million in indirect economic benefits in the Smithers-Houston area (Chan and Hancock 2008).

The regional tourism sector is also growing, largely based on wilderness and backcountry recreation activities. Smithers’ role as a service centre is enhanced by its transportation facilities and business services (Town of Smithers 2010b). The Smithers Regional Airport runway was extended in 2008 to

accommodate regional jets in order to support the mining industry (Smithers Regional Airport 2010). The airport is currently completing a pre-feasibility study to expand the terminal and make industrial development possible on land adjacent to the airport (Brucejack Project Research Program 2012a).

Since the relocation of government services from Dease Lake to Smithers in the 1990s, the community has also seen its role expand in public administration and government services, including health and education as the community increasingly fulfils regional needs in these areas. Professional and scientific positions are more prevalent in Smithers than in much of the region, including Terrace. In general, the labour economy is diversified and able to provide a wide range of services (BC Stats 2007b).

In 2010, the Bulkley Valley Economic Development Association was established to help generate leads for businesses in the community and support the growth of new and additional commercial and industrial opportunities in both the community and broader region (Brucejack Project Research Program 2012a). In order of importance, the Bulkley Valley Economic Development Association will be focusing on the mining, tourism, and forestry sectors going forward to encourage further economic development.

### 6.3.6 Terrace

Terrace is situated on a key freight corridor at the junction of highways 16 and 37 (Figure 4.1-1). Neighbouring communities include Kitimat (64 km to the south), Prince Rupert (140 km west), and Smithers (210 km east; BC Stats 2009d). Terrace is located within the RDKS and is a strategic regional centre for business, retail, medical, and government services, as well as a hub for highway, rail, and air transportation (NDIT 2010a).

Historically, Terrace relied heavily on the forestry industry. Forestry related jobs in Terrace have shrunk considerably in recent years, with the closure of several large industrial mills. The Terrace Lumber Company mill (formerly Skeena Cellulose Inc.) closed in 2007, resulting in the loss of 300 direct jobs (Rescan 2009). The West Fraser-Skeena sawmill closed in early 2010. Most notably, the Eurocan Pulp and Paper Mill, which operated in Kitimat since the 1960s, closed permanently in early 2010 (S. Harling, pers. comm.; Pöyry FIC 2010). The mill employed 535 persons and had numerous suppliers in Terrace and Kitimat. Forestry activity has increased since 2010, although much of this renewed activity focuses on the export of raw logs to Asian markets (S. Harling, pers. comm.; R. Dykman, pers. comm.).

Currently, the Terrace economy is diversifying with expanding tourism and service-based sectors. The city's strategic location and relatively large population give it a critical mass that enhances its capacity to fulfil its emerging role as a key supply-and-service centre for much of northwest BC. Size and diversity also afford the residents of Terrace the opportunity to enjoy many social, cultural, and economic opportunities that are absent or much less readily available in most other communities within the RSA.

Terrace also sees an opportunity to supply the mineral sector, both in exploration and development. For example, the Rio Tinto Alcan modernization project in Kitimat has generated jobs and local economic activity in Terrace. Estimates place total potential investment in northwest BC projects that were in an advanced stage of development or permitting in 2011 at over \$10.6 billion (K.T. Industrial Development Society 2011).

There is concern among some business and civic leaders that an underdeveloped industrial tax base may limit the City's capacity to capitalize on and benefit from the regional 'boom' in resource development (Brucejack Project Research Program 2012b). To address the perceived weakness, the City of Terrace is currently studying the potential to expand their industrial base by identifying emerging industries and best

ways to attract them to existing serviced industrial lands (M. Kwiatowski, pers. comm.) and to develop strategies for the development of additional industrial lands south of the airport (S. Harling, pers. comm.).

In 2005, Terrace benefited from seasonal mining jobs and \$1.3 million in service industry expenditures associated with regional mineral exploration activity (BC MEMPR 2006). Mineral exploration in northwest BC is estimated to have led to the generation of \$2.9 million in indirect economic benefits in the Terrace service industry (Chan and Hancock 2008). Six percent of incomes in Terrace were dependent on mining in 2006 compared to 4% for tourism (Horne 2009).

Terrace's economic development strategy includes a focus on its location along Canada's Pacific Gateway, an integrated transportation network of airports, seaports, railways, and roadways linking Canadian, North American, Asian, and other world markets (TEDA 2011). The Terrace Economic Development Authority (TEDA), a public-private partnership, fosters Terrace's economic growth through marketing, investment development and the promotion of local business. TEDA also provides economic development and market advice and maintains a database of all local businesses (TEDA 2010). TEDA provides economic development and market advice and maintains a database of all local businesses (TEDA 2010).

Assistance to Terrace businesses can be provided through the 16/37 Community Futures Development Corporation and the Business Development Bank of Canada. The SNDS, which closed in 2009, formerly provided training and employment support services to Aboriginal peoples in the city.

## 7. Regional and Local Population Demographics



## 7. Regional and Local Population Demographics

Population data from Statistics Canada, BC Stats, and AANDC is provided for LSA communities. Statistics Canada provides data on a variety of topics (such as population, housing, and employment) obtained from the Census of Canada, which is conducted every five years. AANDC provides data on population and governance obtained from First Nations communities in Canada monthly. Additional sources, such as the population study carried out by the Skeena Native Development Society (SNDS; 2007) are used where available for comparative purposes and additional context.

### 7.1 REGIONAL POPULATION

The RSA's population in 2011 was 42,752 (Statistics Canada 2012b). The population has generally declined over the past decade or more, largely due to the loss of jobs, particularly among non-Aboriginal communities. Stewart, for instance, has experienced the greatest reduction with its population dropping over 42% between 1996 and 2011 (Statistics Canada 2002c, 2012b). The populations of Smithers and Terrace, the RSA's largest centres, have also declined, albeit at lower rates of 3.9 and 10.1%, respectively.<sup>16</sup>

Overall, the RSA experienced an average drop in population of 13% between 1996 and 2011 (Table 7.1-1), with a slightly slower rate of decline between 2006 and 2011 (Statistics Canada 2002c; BC Stats 2012d; Statistics Canada 2012b). In 2012 the population of the North Coast Development Region, which includes Prince Rupert but not Smithers, shrank 0.2% confirming that although the region is still losing people it is doing so at a much slower rate than in recent years (57 people; ICABC 2013).<sup>17</sup> The reduced rate of decline and potential reversal of population loss in the region may be due to the increasing level of economic activity in the RSA over the last five years as well as the anticipated near and mid-term growth due to recent private and government investments in natural resources and utilities (see Section 6; ICABC 2013).

**Table 7.1-1. Regional Study Area Population, 1996 to 2011**

Region	1996	2001	2006	2011	Aboriginal Identity, 2006 (% of pop.)
		(% change from previous census)	(% change from previous census)	(% change from previous census)	
RDKS	43,618	40,876 (-6.3%)	38,476 (-7.0%)	37,361 (-2.9%)	12,275 (32%)
Electoral Area A (RDBN)	5,573	5,696 (+2.2%)	5,290 (-7.1%)	5,391 (+1.9%)	470 (9%)
<b>Total Regional</b>	<b>49,191</b>	<b>46,572 (-5.4%)</b>	<b>43,766 (-6.1%)</b>	<b>42,752 (-2.4%)</b>	<b>12,745 (29.1%)</b>
British Columbia	3,724,500	3,907,738	4,113,487	4,400,055	196,070 (4.8%)

Sources: Statistics Canada (1997, 2002c, 2007a, 2012b); BC Stats (2011a).

Note: Geographic area boundaries for both the RDKS and Electoral Area A of the RDBN changed between 1996 and 2011. In order to facilitate comparison, Statistics Canada adjusted the Census population counts as needed.

<sup>16</sup> Both communities, however, saw slight increases in their population between 2006 and 2011, which could indicate a change in the trend. See Section 4.2 for more details.

<sup>17</sup> The North Coast Development Region overlaps to a large degree with the Project's RSA and includes the RDKS and Regional District of Skeena-Queen Charlotte. The North Coast Development Region includes Prince Rupert but excludes Smithers and RDBN's Electoral Area A.

The proportion of males and females has remained relatively unchanged in the last 10 years, with males (51%) slightly outnumbering females (49%) in 2011 (Figure 7.1-1). Almost 65% of the population is between the ages of 18 to 64 years, with 23% of the population aged 17 years and under (BC Stats 2011a). The RSA’s median age is around 40 to 42 which is on par with the provincial median (Statistics Canada 2002c, 2007a, 2012b). Almost 5.2% of the population were visible minorities in 2006 (BC Stats 2011a).

### 7.1.1 Aboriginal Population

Aboriginal peoples have a physical, cultural, and historical presence throughout the RSA, which has a high proportion of Aboriginal residents in comparison with the rest of the province. The RSA includes the Nisga’a villages as well as IRs for the Tahltan Nation, Gitksan Nation, Gitanyow First Nation, Tsimshian First Nation, Haisla Nation, and Wet’suwet’en First Nation. Most of the RSA’s smaller communities, particularly those located along the north-south corridor of Hwy 37 and east-west near Hwy 16, are predominantly Aboriginal (Figure 4.1-1).

In 2006, over 29% of the RSA’s population identified as Aboriginal, including members living both on and off-reserve (Table 7.1-2). A total of 12,745 people, approximately 32% of the RDKS’s population and 9% of RDBN’s Electoral Area A, identified as Aboriginal compared with 4.8% provincially (Statistics Canada 2007a; BC Stats 2010b, 2011a).

**Table 7.1-2. Aboriginal Populations for Nations identified in the Brucejack Project Section 11 Order, 2001 to 2011**

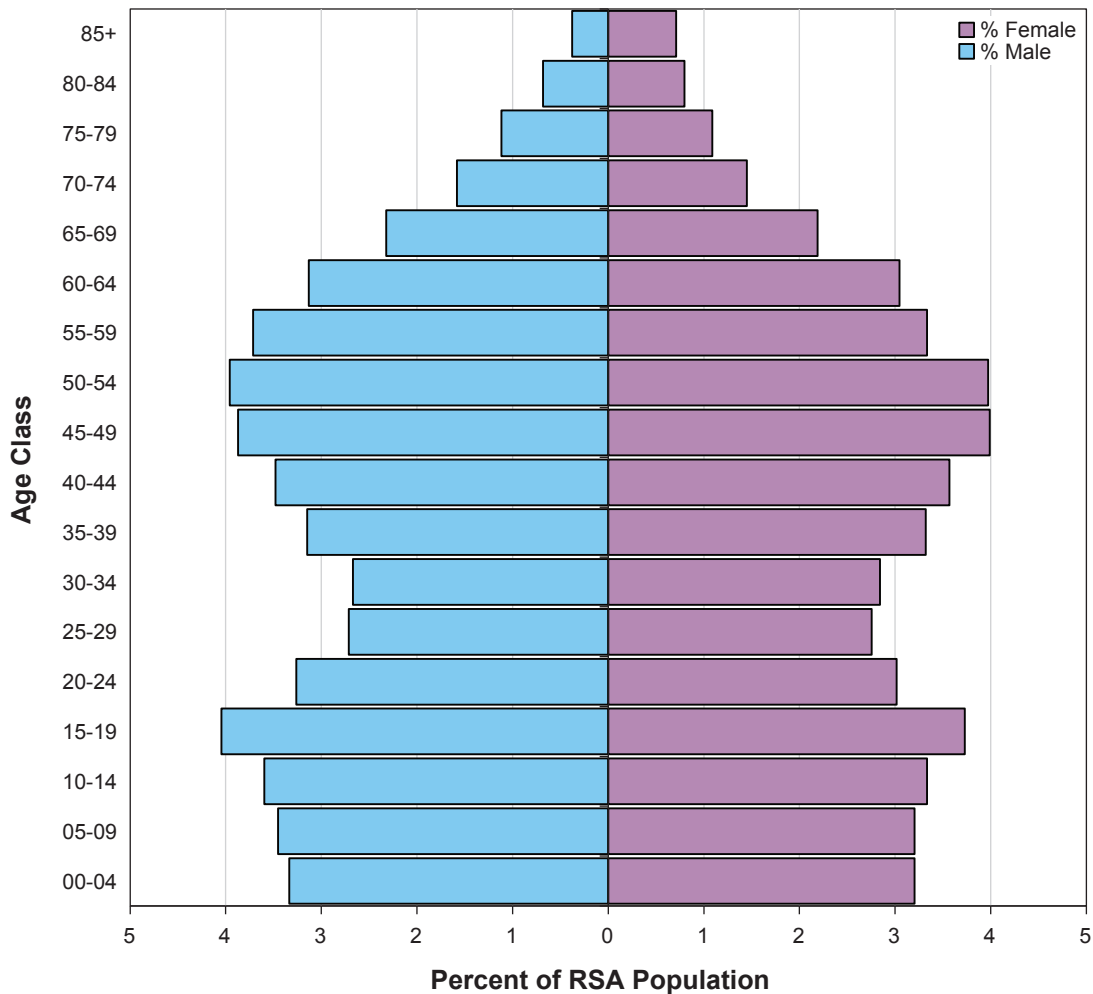
Aboriginal Group	Statistics Canada Census			% Change (2001-11)	AANDC <sup>1</sup> 2012
	On IR or Nisga’a Lands				
	2001	2006	2011		
Tahltan communities	595	654	427	-28.2	n/a
Total membership (on- and off-reserve)	-	-	-	-	2,487 (est.) <sup>2</sup>
Nisga’a villages	1,919	1,919	1,909	-0.5%	2,014
Total membership (on and off Nisga’a Lands)	-	-	-	-	5,904
Gitanyow	369	387	383	+3.8%	382
Total membership (on- and off-reserve)	-	-	-	-	802
Gitksan communities	2,422	2,751	2,333	-3.7%	2,299
Total membership (on- and off-reserve)	-	-	-	-	6,453
<b>Total</b>	<b>5,305</b>	<b>5,711</b>	<b>5,052</b>	<b>-4.8%</b>	<b>15,646</b>

Source: Statistics Canada (2002c, 2007a, 2012b); AANDC (2012a).

Notes:

<sup>1</sup> Total self-reported Nisga’a or First Nation membership. Note that not all members necessarily live within the RSA for the current study and baseline report.

<sup>2</sup> The Iskut First Nation discontinued providing membership information to AANDC in December 2010. Total Tahltan Nation membership is estimated based on reported 2012 Tahltan Indian Band membership (1,782) and the Iskut population as last reported in December 2010 (705).



Note: Approximation of the population demographics of the RSA calculated from the census number for the RDKS minus the population of Kitimat and plus the population of Electoral Area A of RDBN.

Source: Statistics Canada. 2012. Kitimat-Stikine, British Columbia (Code 5949) and British Columbia (Code 59) (table). Census Profile. 2011 Census. Statistics Canada Catalogue no. 98-316-XWE. Ottawa. Released October 24, 2012. <http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/index.cfm?Lang=E>. (accessed February 19, 2013).

Statistics Canada. 2012. Kitimat, British Columbia (Code 5949005) and Kitimat-Stikine, British Columbia (Code 5949) (table). Census Profile. 2011 Census. Statistics Canada Catalogue no. 98-316-XWE. Ottawa. Released October 24, 2012. (accessed February 19, 2013). <http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/index.cfm?Lang=E> (accessed February 19, 2013).

Statistics Canada. 2012. Bulkley-Nechako A, British Columbia (Code 5951051) and Bulkley-Nechako, British Columbia (Code 5951) (table). Census Profile. 2011 Census. Statistics Canada Catalogue no. 98-316-XWE. Ottawa. Released October 24, 2012. <http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/index.cfm?Lang=E>. (accessed February 19, 2013).

Figure 7.1-1

Population of Regional Study Area, 2011

The combined population of the Aboriginal communities (see Table 7.1-2) included in the LSA amounted to 5,711, almost 45% of the RSA's overall Aboriginal population (Table 4.2-2; Statistics Canada 2007a; Statistics Canada 2012b). According to the 2011 census, the combined population of these communities dropped to 5,052. AANDC population data from July 2012 was generally comparable with the 2011 census, with the exception of Nisga'a Lands, where an additional 100 residents were reported (AANDC 2012a).

Notably, a large proportion of the registered population from Aboriginal groups identified in Table 7.1-2 live off reserve, including elsewhere in the RSA, the province, or elsewhere. The total number of members of these Aboriginal groups, including both off- and on-reserve, is 15,646. In general, 95% or more of the population of First Nation reserve communities and Nisga'a villages are of Aboriginal descent (Statistics Canada 2007).

While the population of the RSA generally declined, Aboriginal communities grew at a rate of 1.5% annually between 1994 and 2006 (SNDS 2007). Since 2006, however, Nisga'a Nation and Gitanyow First Nation populations have remained relatively stable, and Tahltan and Gitksan populations have declined (Statistics Canada 2012b). Figure 7.1-2 illustrates the age and gender distribution of the Aboriginal population aggregated from the 2011 census community profile data for the communities at Guhthe Tah IR 12, Iskut IR 6, Gitanyow IR 1, Gitsegukla IR 1, Gitwangak IR 1, Gitanmaax IR 1, Kispiox IR 1, Sik-e-dakh IR 2 (Glen Vowell), and Nisga'a villages.<sup>18</sup> The figure does appear to confirm that overall the Aboriginal population in the RSA is younger than the wider population.

## 7.2 LOCAL STUDY AREA POPULATION DEMOGRAPHICS

Table 7.2-1 provides a summary of population data and trends for the LSA communities from 1996 to 2001. Subsequent sections provide commentary on these and other population demographics on a community by community basis.

The loose geographic areas described in Section 4.1.3 form the basis of organization of subsections of this and subsequent, broad thematic chapters of the report.

### 7.2.1 Dease Lake and the Tahltan Nation Communities

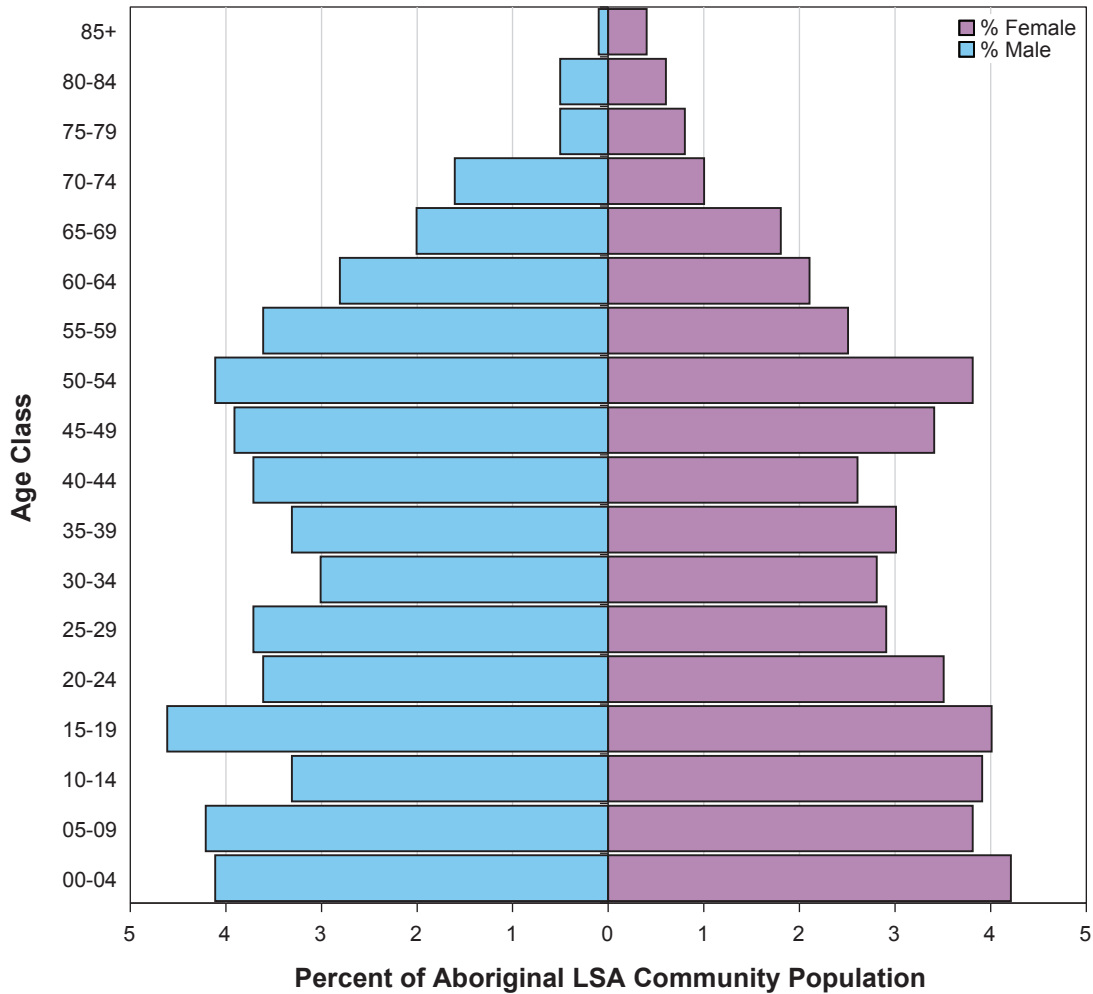
Dease Lake is an unincorporated community that served as the centre for government services in the region until the 1990s. Since the relocation of most services to Smithers, the population of this community has declined significantly (Bridges and Robinson 2005). The notable decline since 2006 may be the result of the Eskay Creek Mine closure in 2008 as well as the global economic downturn in 2008/2009, which slowed down economic activity in the region (Table 7.2-1). Almost 39% of the Dease Lake population in 2006 identified as Aboriginal, compared to 4.8% of the province and 32% of the RDKS (Statistics Canada 2008).

A 2007 Tahltan Nation census (Tahltan census) reported a total of 651 Tahltan members living on-reserve in Telegraph Creek, Dease Lake IR 9, and Iskut (Rescan 2013c, 2013d). This figure aligns with 2006 national census data for the three communities (Statistics Canada 2007a).

Approximately 20% of the registered members of the Tahltan Nation live on the Tahltan Indian Band or the Iskut Nation reserves, the remainder live mostly off reserve, although a small portion live on other IRs (Table 7.2-2).

---

<sup>18</sup> Due to Statistics Canada procedures to protect the identity and confidentiality of individuals in small communities, male and female population numbers are randomly rounded to the nearest five. The effect of this practice on gender distribution is hard to confirm; however, it does appear that the population of males may be slightly exaggerated.



Note: The population statistics are summed from the Statistics Canada 2011 census profiles for Guhthe Tah 12, Iskut 6, Gitanyow 1, Gitsegukla 1, Gitwangak 1, Gitanmaax 1, Kispiox 1, Sik-e-dakh 2 (Glen Vowell), and Nisga'a (Nisga'a Lands)

Source: Population Tables and Figs - Brucejack SE baseline 2012.

Figure 7.1-2

Table 7.2-1. Local Study Area Community Population Trends, 1996 to 2011

Community <sup>1</sup>	1996	2001	2006	2011	% Change (1996 to 2011)
Dease Lake	n/a	318	384	303	-5%
Dease Lake IR 9	104	66	68	58	-44%
Iskut IR 6	271	238	335	207	-24%
Telegraph Creek IR 6 <sup>2</sup>	96	63	62	51	-99%
Telegraph Creek IR 6A <sup>2,4</sup>	138	20	162	1	-100.0% <sup>4</sup>
Guhthe Tah IR 12 (Telegraph Creek) <sup>3,4</sup>	0 <sup>3</sup>	140	173	157	100.0% <sup>4</sup>
<b>Subtotal: Tahltan Nation reserves</b>	<b>609</b>	<b>527</b>	<b>654</b>	<b>427</b>	<b>-30%</b>
Stewart	858	661	496	494	-42%
Gitlaxt'aamiks <sup>5,6</sup>	739	716	806	758	3%
Gitwinksihlkw <sup>5</sup>	231	212	201	184	-20%
Laxgalts'ap <sup>5</sup>	598	467	474	378	-37%
Gingolx <sup>5</sup>	318	339	341	408	28%
<b>Sub-total: Nisga'a Lands<sup>5</sup></b>	<b>1,886</b>	<b>1,734</b>	<b>1,822</b>	<b>1,728</b>	<b>-8%</b>
Hazelton	347	345	293	270	-22%
New Hazelton	822	750	627	666	-19%
Gitanmaax	638	693	723	627	-2%
Gitsegukla	506	432	721	448	-11%
Gitwangak	481	475	465	500	4%
Glen Vowell <sup>2</sup>	177	171	225	222	25%
Kispiox	553	651	617	536	-3%
<b>Subtotal: Gitxsan Nation reserves</b>	<b>2,355</b>	<b>2,422</b>	<b>2,751</b>	<b>2,333</b>	<b>-1%</b>
Gitanyow	408	369	387	383	-6%
Smithers	5,624	5,414	5,217	5,404	-4%
Terrace <sup>5</sup>	12,783	12,109	11,320	11,486	-10.

Source: Statistics Canada (2002d, 2012b); AANDC (2012a); BC Stats (BC Stats 2007a).

Notes:

<sup>1</sup> To ensure confidentiality and protect the privacy of individuals, Statistics Canada employs a method called random rounding in which values, including totals, are randomly rounded either up or down to a multiple of five.

<sup>2</sup> To enable comparison between census years, Statistics Canada has adjusted 2006 census data as needed to take into account boundary changes that occurred between 2006 and 2011.

<sup>3</sup> Statistics Canada notes an adjusted population count for 1996.

<sup>4</sup> A percentage change from zero to any number represents an increase of 100% or infinity.

<sup>5</sup> Statistics Canada notes adjusted 1996 census data, to account for a census boundary change between 1996 and 2001.

<sup>6</sup> Statistics Canada has adjusted 2006 census data to account for a census boundary change between 2006 and 2011.

Table 7.2-2. Tahltan Population

Community	Population on Reserve	Population on Other Reserves	Population on Own Crown Land	Population on No Band Crown Land	Population Off Reserve	Total Registered Population
Tahltan Indian Band	290	45	3	0	1,444	1,782
Iskut First Nation <sup>1</sup>	207	n/a	n/a	n/a	n/a	705

Source: AANDC (2010d, 2012b), Statistics Canada (2012a)

Notes:

<sup>1</sup> AANDC data not available for the Iskut Band.

According to Statistics Canada, the population in each Tahltan community has decreased since 1996, with the most significant decrease occurring between 2006 and 2011 in all communities (Table 7.2-1). The 2011 census reports a total population of 427 persons residing on reserves compared to 654 residents in 2006, a cumulative decline of almost 30%. This result is difficult to explain given the level of economic activity and mineral exploration in Tahltan Nation traditional territory over the last few years (see KSM Project: 2012 Economic Baseline Report [Rescan 2013c]). Despite efforts to collect community-based research to help clarify this trend, primary data gathering had not occurred at the time of writing.

The median age across all Tahltan Nation communities where data were available remains below the provincial average (41.9 years), with Dease Lake IR9 reporting the lowest median age at 27.5. Nonetheless, the median age in Tahltan communities increased over the last 10 years, most notably in Iskut where the median age was 35.8 in 2011. This trend contrasts with the national trend in Aboriginal communities where the median age is generally declining (Statistics Canada 2007a). In Dease Lake (UNI) and the Tahltan Nation communities there are slightly more male than female residents (AANDC 2012a).

### 7.2.2 Stewart and the Highway 37 Settlements

Stewart's population has fallen dramatically in the past twenty years, coinciding with the closure of the Granduc and Premier mines (Bridges and Robinson 2005) and exacerbated by the downturn in forestry. The population declined by approximately 42%, or 362 residents, between 1996 and 2006—the largest drop amongst LSA communities (Table 7.2-1). Notably, the trend appears to have stabilized between 2006 and 2011 (Statistics Canada 2012b).

The median age of the community has increased as the population declined, an indication that younger residents may have moved out of the community since 1996. The median age in 2001 was 36.2 years, increasing to 43.0 years in 2011, higher than the provincial figure of 41.9 years (Statistics Canada 2012b). Stewart's population was 53% male and 47% female in 2011 and comprised the lowest proportion of Aboriginal residents (10%) in the RDKS.

### 7.2.3 Nisga'a Nation Communities

A large proportion of Nisga'a citizens reside in four villages within Nisga'a Lands, along the Nass River, approximately 230 km south of the proposed Project (see Figure 4.1-1). Nisga'a citizens also live in Terrace, Prince Rupert, Vancouver, and elsewhere.

Nisga'a Nation consists of approximately 5,900 members, over 2,000 of whom reside in one of the four Nisga'a villages (Statistics Canada 2007a; AANDC 2012a). Table 7.2-3 summarizes the populations of the four Nisga'a villages and the number of Nisga'a Nation members living outside of Nisga'a Lands.

**Table 7.2-3. Nisga'a Nation Community Populations, July 2012**

Community	Community Population 2012	Population on other Reserves	Population off Nisga'a Lands	Total Registered Population
Gitlaxt'aamiks	858	51	906	1,815
Gitwinksihlkw	182	28	182	392
Laxgalts'ap	566	54	1,110	1,731
Gingolx	408	68	1,491	1,966
<b>Total</b>	<b>2,014</b>	<b>201</b>	<b>3,689</b>	<b>5,904</b>

Source: Statistics Canada (2002c); AANDC (2012a).

Note: AANDC population data are provided by an administrator from each community each month and is based on total membership on and off Nisga'a Lands.

By comparison, figures reported from the 2011 census are slightly below AANDC (2012a) figures. For instance, Statistics Canada reports 1,728 residents in the four Nisga'a villages and 1,909 residents on Nisga'a Lands (Statistics Canada 2012b). Table 7.2-1 at the beginning of this section compares the total and individual village populations between 1996 and 2011.

Village populations have fluctuated over this 15-year period, although collectively they have decreased by about 8% since 1996 (or 5.2% since 2006). Notably, the population of Gingolx increased over 28% relative to 1996 figures, most likely attributable to the 2003 completion of a 28-km road connecting the community to the other three Nisga'a villages for the first time (Village of Gingolx 2012).

The median age of residents on Nisga'a Lands in 2011 was 35.6 years, an increase of almost three years since 2006 (Statistics Canada 2007a, 2012b). Twenty-two percent were under 15 years of age (Statistics Canada 2012b). Approximately 55% of residents were male and 45% female.

Nearly 68% of all Nisga'a Village residents<sup>19</sup> in 2006 had lived in the same place for the previous five years. Only 0.8% of residents had migrated to (or back to) Nisga'a villages from out of province between 2001 and 2006 (Statistics Canada 2007a).

#### **7.2.4 The Hazeltons and Skii km Lax Ha, Gitxsan Nation, and Gitanyow First Nation**

The Village of Hazelton and the District of New Hazelton (i.e., The Hazeltons) are located approximately 140 km northeast of Terrace and 60 km northwest of Smithers on the Yellowhead Hwy 16 where the Skeena River meets the Bulkley River (Figure 4.1-1).<sup>20</sup> The greater Hazelton area consists of these two municipalities, as well as three unincorporated settlements (South Hazelton, Two Mile, and the Kispiox Valley), five Gitxsan Nation reserves (Gitwangak 1, Gitsegukla 1, Gitanmaax 1, Glen Vowell [Sik-e-Dakh 2], and Kispiox 1; AANDC 2012a; Statistics Canada 2012b), and the Wet'suwet'en community of Hagwilget. The Hazelton area has been home to the Gitxsan Nation, Skii km Lax Ha, and Wet'suwet'en First Nations for more than 7,000 years (Village of Hazelton 2008).

The Village of Hazelton and District of New Hazelton are referred to locally by the regionalism "The Hazeltons," which, to varying degrees, includes some or all of the communities noted above, especially Gitanmaax, Two Mile, Hagwilget, and South Hazelton (Brucejack Project Research Program 2012c, 2013). Alternatively, the broader, more inclusive term "Upper Skeena" is also used locally to describe the Hazeltons and communities of the Gitanyow First Nation and Gitxsan Nation. The provincial Local Health Area (LHA) 53 is also known as the Upper Skeena LHA. The results and discussion in this section does not include the unincorporated settlements (i.e., Two Mile, Hagwilget, and South Hazelton). Instead their population demographics are captured more broadly within totals reported for the RSA.

#### The Hazeltons

The population of both Hazelton and New Hazelton has declined over the last 15 years, consistent with the trend across the RSA more generally (Table 7.2-1) and widely attributed to the downturn in the forestry industry and subsequent closure of three sawmills in recent years. Collectively, the 2011 population in Hazelton and New Hazelton was 936, a decrease of over 20% since 1996 (Statistics Canada 2002c, 2007a, 2012b). This trend may have stabilized or reversed in New Hazelton, as the community showed a population increase of almost 6% between 2006 and 2011.

---

<sup>19</sup> Data was suppressed for the Village of Laxgalts'ap in 2006.

<sup>20</sup> Data specific to the unincorporated settlement of South Hazelton is aggregated within the data for the RDKS and is not specifically included as part of the LSA communities.



According to Statistics Canada, the median age increased by approximately ten and seven years, respectively, in Hazelton and New Hazelton since 1996. The median age in Hazelton (47.0) is higher than for New Hazelton (40.4) and the province (41.9) and is the highest for all LSA communities (Statistics Canada 2012b) and trend that may very well be linked to sawmill closures causing younger individuals to leave the community in search of employment elsewhere.

The Village of Hazelton reported more females (56%) than males (44%), whereas New Hazelton comprised more males (51%) than females (49%) in the most recent census (Statistics Canada 2012b). The proportion of the population identifying as Aboriginal ranged from over 49% in Hazelton to 37% in New Hazelton (Statistics Canada 2007a).

In 2006, only 60% of all residents of Hazelton and New Hazelton had lived in the same place for the previous five years. However, only 2.3% of residents had migrated to the area from out of province, the remainder coming from the same census area or within the province (Statistics Canada 2007a)

#### Skii km Lax Ha

There is limited statistical or economic information available on the Skii km Lax Ha as they do not have a designated Indian Reserve. According to the current chief of the Skii km Lax Ha the First Nation is estimated to consist of approximately 15 to 30 people, most of whom live in Hazelton and New Hazelton (Brucejack Project Research Program 2013). Another branch of the Skii km Lax Ha lineage (approximately 15 people) lives in the western United States and maintains regular contact with those in northwest BC.

#### Gitxsan Nation Communities

According to the Gitxsan, there are approximately 13,000 Gitxsan Nation members residing the Gitxsan communities, in Hazelton and New Hazelton, and elsewhere in BC, Canada, and worldwide (Gitxsan Chiefs' Office 2010).

By comparison, the Gitxsan Nation had a total registered population of 6,453 in July 2012, with a reported 2,299 individuals living in the Gitxsan communities, 3,863 living off reserve, and 291 on other reserves (AANDC 2012c). A significant proportion of Gitxsan members based in BC reside in or near the Hazeltons. Table 7.2-4 provides a detailed breakdown of the population based on location.

**Table 7.2-4. Gitxsan Nation Registered Population, July 2012**

Community	Community Population 2012	Population on other Reserves	Population off Reserves	Total Registered Population
Gitanmaax	708	103	1,467	2,278
Gitsegukla	413	38	518	969
Gitwangak	403	35	792	1,230
Glen Vowell	174	19	209	402
Kispiox	601	96	887	1,574
<b>Total</b>	<b>2,299</b>	<b>291</b>	<b>3,873</b>	<b>6,453</b>

Source: AANDC (2012c).

The 2011 census reports a total of 2,333 individuals residing in the Gitxsan communities, a moderate decline from 2006. Two of the five Gitxsan communities experienced increases in population between 1996 and 2011 (Table 7.2-1). The largest gain was in Glen Vowell where the population increased by approximately one-quarter. The largest decrease occurred in Gitsegukla (-11%). Kispiox and Gitanmaax

both experienced small decreases in population over the same time period, -3.1% and -1.7%, respectively. Overall, the Gitxsan Nation experienced a slight decrease in population (-0.9%) between 1996 and 2011, which for many is attributable to the sawmill closures that took place during these years (Brucejack Project Research Program 2012c).

Overall, the median age in four of the Gitxsan communities increased over the last decade, with the exception of Glen Vowell, where the median age decreased between 2001 and 2006, and then increased only slightly between 2006 and 2011. In 2011, the average median age was just over 32 years, well below the provincial average of 42 years, even for the “oldest” community, Gitanmaax, where the median age is just over 36 years (Statistics Canada 2012).

Gitanyow First Nation

According to AADNC, in July 2012, there were 802 Gitanyow members, including 382 members residing on reserve at Gitanyow, 34 members residing on other reserves, and 386 members residing off reserve (Table 7.2-5).

**Table 7.2-5. Gitanyow Population, July 2012**

Community	Population on Reserve	Population on Other Reserves	Population on Own Crown Land	Population on No Band Crown Land	Population off Reserve	Total Registered Population
Gitanyow	382	34	0	0	386	802

Source: AANDC (2012d).

The on-reserve population decreased by 6% between 1996 and 2011 but appears to have stabilized between 2006 and 2011 (Table 7.2-1).

Over 74% of all Gitanyow residents in 2006 had lived in the same place for the previous five years. No residents had migrated to the area from out of province between 2001 and 2006 (Statistics Canada 2007a).

**7.2.5 Town of Smithers**

Smithers is located within the Bulkley Nechako Regional District (RDBN) along Hwy 16, approximately halfway between Prince Rupert and Prince George (Figure 4.1-1). Smithers is the regional service centre for the Bulkley Valley given its strategic location along the routes of Hwy 16 and the Canadian National Railway.

Smithers experienced the smallest overall population decrease amongst the LSA communities, dropping in 2006 but essentially returning to 2001 population levels by 2011 (Table 7.2-1). The population of Smithers in 2011 was 5,404, a decrease of less than 4% since 1996.

As with other LSA communities, the median age has increased since 2001 from 33.3 to 37.2, though it is the second lowest amongst LSA communities and remains below the provincial average of 41.9 (Statistics Canada 2012b). The male to female ratio in the community was similar to the province, with almost 49% male and 51% female residents. In 2006, almost 15% of the Smithers population identified as Aboriginal, as compared to 29% for the RSA (Statistics Canada 2007a).

The population of Smithers remained relatively stable between 2001 and 2006. Over 81% of all Smithers residents had lived in the same place for the previous five years. Only 2.1% of residents had migrated

to the area from out of province, the remainder coming from the same census area or within the province (Statistics Canada 2007a).

#### 7.2.6 City of Terrace

With an estimated reported population of 11,486 in 2011 (Statistics Canada 2012b), Terrace is the largest of the LSA communities and an important service centre for trade and public administration in BC's northwest region. By contrast, the 2010 population of Terrace and the surrounding vicinity comprised over 19,700 people (TEDA 2011).

According to Statistics Canada, since 1996 the community's population declined by over 10%; however, this trend appears to have stabilized, as Terrace experienced a population increase of 166 persons between 2006 and 2011 (Table 7.2-1; M. Kwiatowski, pers. comm.). The slight increase is potentially due to an economic turnaround, due in part to the level of investment in infrastructure projects and mineral exploration throughout the RSA in recent years (see Section 6).

Terrace's median age is 38.8, an increase consistent with the regional trend between 2001 and 2011. In spite of this increase, the median age remains below the provincial median of 41.9 (Statistics Canada 2012b). The community's gender ratio, with 49% males and 51% female residents, is comparable to the province. At the time of the previous census (2006) over 21% of Terrace's population identified as Aboriginal, notably higher than both Smithers and Stewart though lower than the 29% figure for the RSA (Statistics Canada 2007a).

### 7.3 SUMMARY OF POPULATION AND DEMOGRAPHICS

#### Population

In general, the population in the LSA and RSA has declined between 1996 and 2011. This decline is most evident in Stewart, where the loss of population has been associated with the loss of jobs (e.g., mine closures). The RSA experienced an average drop in population of 13% in this 15-year period, with the rate of decline lessening, and in some cases stabilizing, between 2006 and 2011. The reduced rate and potential reversal of population loss for certain communities in the region may be due to the increased level of primary natural resources-based economic activity in the RSA.

#### Aboriginal

Residents of most of the smaller communities are predominantly of Aboriginal descent and comprise a larger proportion of the regional population relative to Aboriginal population of other regions in the province. It is typical that >95% of the residents of reserve communities and the Nisga'a villages are Aboriginal, nevertheless, most Aboriginal people in the RSA live off-reserve or outside of Nisga'a Lands. The population of Aboriginal communities generally shrank and got older since the 1996 census reflecting the extreme lack of economic opportunity on reserves and in the Nisga'a villages. The gender balance is tipped slightly towards males in Aboriginal communities.

## 8. Business and Industry

## 8. Business and Industry

### 8.1 REGIONAL STUDY AREA

In 2006, goods sector industries (including primary industries, construction, and manufacturing) accounted for a large proportion of employment in the RSA (31%) compared to the province (21%; Statistics Canada 2007b).<sup>21</sup> Agriculture and other resource-based industries were particularly important in the RDBN's Electoral Area A (21%), while manufacturing was the main industry within the RDKS, employing 16% of its total labour force. Collectively, manufacturing was the main source of employment (15.1% of the total RSA labour force), followed in order of importance by business services, health care and social services, retail trade, and agriculture and other resource-based industries. Table 8.1-1 presents a breakdown of employment by industry within the RSA in 2006.

**Table 8.1-1. Regional Study Area Labour Force by Industry, 2006**

Industry	RDKS	Electoral Area A	RSA Total	BC
Total experienced labour force over 15 years of age	19,340	3,190	22,530	2,193,115
Agriculture and other resource-based industries	8.0%	20.9%	9.8%	4.9%
Construction	6.1%	8.1%	6.4%	7.6%
Manufacturing	16.0%	9.3%	15.1%	8.6%
Wholesale trade	1.7%	1.7%	1.7%	4.2%
Retail trade	10.2%	9.2%	10.1%	11.4%
Finance and real estate	3.0%	3.2%	3.0%	6.2%
Health care and social services	11.2%	9.5%	10.9%	9.7%
Educational services	9.3%	7.0%	9.0%	7.0%
Business services	13.2%	12.2%	13.0%	19.9%
Other services	21.4%	18.8%	21.0%	20.6%

*Note: Numbers may not sum due to rounding errors at source.*

*Source: Statistics Canada (2007b).*

It is anticipated that figures provided in Table 8.1-1 have changed over the last five years and will continue to change as a result of new and on-going business and investment activity in the northwest. The investment value in the North Coast Development Region, for instance, grew by 17.1% between 2010 and 2011, totalling \$44 billion.<sup>22</sup> Important contributions to this growth were projects currently at the proposal stage (worth \$4 billion) as well as construction activity worth \$1.4 billion (ICABC 2013).

The following section considers the types and capacity of local business and industry that support the economy(ies) of the RSA and LSA.

<sup>21</sup> Only limited 2001 census data was available from Statistics Canada at the time of writing. Data, reports, and community profiles from BC Stats will not start incorporating 2011 census data until later in 2013, well after completion of this socio-economic baseline report.

<sup>22</sup> The North Coast Development Region is located in northwest BC, bound by the Gwaii Haanas National Park Reserve on the southern tip of the Queen Charlotte Islands in the southwest, Telegraph Creek and Iskut in the North and New Hazelton in the east. With a total land area of 124,243 km<sup>2</sup>, the region comprises 13.5% of the province.

## 8.2 LOCAL STUDY AREA

Table 8.2-1 shows the percentage of the total experienced workforce employed by each industry or employment sector.

Table 8.2-1. Local Study Area Communities Labour Force by Industry, 2006

Industry or Employment Sector Community	Total experienced labour force over 15	Agriculture and other resource-based industries	Construction	Manufacturing	Wholesale trade	Retail trade	Finance and real estate	Health care and social services	Educational services	Business services	Other services
Dease Lake	275	4%	15%	4%	0%	6%	0%	9%	26%	6%	24%
<i>Tahltan First Nation communities</i>											
Dease Lake 9	30	33%	33%	0%	0%	0%	0%	0%	0%	0%	33%
Guthe Tah 12	70	21%	14%	0%	0%	0%	0%	15%	0%	14%	29%
Iskut 6	160	22%	9%	0%	0%	6%	0%	15%	13%	9%	22%
Telegraph Creek 6 and 6A	X	X	X	X	X	X	X	X	X	X	X
Stewart	305	12%	12%	0%	0%	0%	3%	8%	7%	16%	36%
<i>Nisga'a Nation communities</i>											
Gitlaxt'aamiks	385	12%	7%	3%	0%	4%	0%	13%	22%	8%	35%
Gitwinksihlkw	110	23%	9%	0%	0%	0%	0%	14%	14%	9%	36%
Laxgalts'ap	X	X	X	X	X	X	X	X	X	X	X
Gingolx	115	13%	9%	0%	0%	9%	0%	17%	9%	13%	30%
Hazelton	195	5%	0%	15%	0%	5%	5%	23%	10%	26%	15%
New Hazelton	310	3%	19%	3%	5%	16%	0%	16%	21%	13%	3%
<i>Gitksan Nation communities</i>											
Gitanmaax	250	10%	8%	4%	0%	8%	0%	14%	12%	6%	34%
Gitsegukla	190	16%	0%	11%	0%	8%	0%	5%	8%	5%	53%
Gitwangak	160	9%	6%	13%	0%	6%	0%	13%	13%	13%	28%
Glen Vowell	75	0%	0%	13%	0%	0%	0%	13%	0%	13%	33%
Kispiox	195	15%	0%	5%	0%	8%	0%	13%	15%	8%	33%
Gitanyow	115	9%	9%	13%	0%	9%	0%	9%	9%	13%	22%
Smithers	2,755	11%	4%	6%	2%	12%	5%	9%	10%	17%	23%
Terrace	5,890	7%	6%	7%	2%	14%	5%	13%	11%	15%	22%

Source: Statistics Canada (2007b).

Note: Numbers may not sum due to rounding errors at source.

X - Statistics Canada has suppressed this data.

Examining the profile of employment by industry, most LSA communities appear to have a large portion of residents engaged in industries classified as "other services" (Table 8.2-1), which includes industries such as equipment and machinery repair, grant writing, personal care services, social advocacy, religious, civic, professional, and other similar organizations among others. Equipment and machinery repair includes automotive repair and maintenance, commercial and industrial machinery and equipment repair

and maintenance, as well as personal and household goods repair and maintenance (Statistics Canada 2007d). Statistics Canada aggregates many of these seemingly disparate occupations - which may all be classified as tertiary sector jobs, as opposed to primary sector (e.g. resource extraction) or secondary sector (e.g. manufacturing) - for 'ease of use' of the data. Also of significance is the high percentage of jobs in education, health care and social services all of which are largely public sector occupations funded either directly or indirectly from government transfer payments or grants.

### 8.2.1 Dease Lake and the Tahltan Nation

#### Local Business

The Dease Lake community website provides a directory of local businesses and the sorts of services available that include groceries, automotive repair, fuel, hardware, and basic supplies (Dease Lake Community Website n.d.). Tourist traffic in summer is important for local hotels, campgrounds, and food suppliers. Other businesses have developed around the demands of the resource industries, providing flights and equipment to remote forestry and mining operators. A number of guide outfitters operate out of the community, offering hunting expeditions, fishing and back-country recreation trips to remote areas of the surrounding region. Several Tahltan operations, including the Tahltan Development Corporation (see below) are also located in Dease Lake.

In recent decades Tahltan Nation members have had a high level of participation in the mining industry. Community residents have been involved in the development and exploration of Eskay Creek, Cassiar, Golden Bear, and Galore Creek. Operating businesses and services in the main Tahltan communities of Iskut and Telegraph Creek, however, remain quite modest.

Iskut has a post office, gas station, grocery store, nursing clinic, and school, as well as the Iskut Band office. The community relies on regional tourism, serving as a highway stop and as a supply centre for guide outfitter operations in the area.

Local businesses in Telegraph Creek include a gas pump and general store. The Stikine River Song Café, open since 1977 and supporting tourism in the area, closed in 2012 and is currently for sale (Stikine RiverSong 2012). Tahltan Indian Band members based both in Telegraph Creek and Dease Lake 9 rely on various commercial and retail businesses located in Dease Lake.

The TNDC, based on Dease Lake IR 9, was established in 1985 to facilitate the long-term economic and environmental sustainability within Tahltan communities as well as Tahltan participation in regional mining and related construction activities (Jepsen 2005). Through discussions and contracts with numerous natural resource industry proponents, the TNDC has evolved into a major local and regional employer (TNDC 2007). The TNDC is involved in mining, road construction, hydroelectric power generation, and forestry both independently and through a number of joint ventures with existing service providers. TNDC employment activities range from catering and custodial work to heavy construction, road development, and transportation. Bear Dog Enterprises is another Tahltan business that creates local opportunities and has established successful joint venture programs (TNDC 2007; ATCO Group 2011).

#### Employment Sectors

In the past, public sector employment in Dease Lake was significant, but this declined substantially with the movement of most government offices from Dease Lake to Smithers in the 1990s (Horne 2009).

In 2006, a quarter of the workforce in Dease Lake classified themselves as being employed in either construction or transportation and warehousing (Statistics Canada 2008; BC Stats 2009a). Another quarter said they were employed in educational services. Public administration; health care

and social assistance; and professional, scientific, and technology services each comprised about 9% of employment. Employment directly related to mining accounted for less than 4% of the workforce (Statistics Canada 2008). The TNDC employs both Tahltan members and non-Aboriginals in various construction, mining, and forestry contracts.

Public sector employment, through the Tahltan and Iskut Band offices, as well as the TCC, is prominent in all three communities; Iskut, Telegraph Creek, and Dease Lake which has a large Tahltan population. Public service employment, for instance, provided 37% of the jobs in Iskut and 46% of the jobs in Telegraph Creek/Dease Lake in 2006 (SNDS 2007).

The Tahltan Nation has historically had a high level of participation in mining industry (Tahltan First Nation and International Institute for Sustainable Development 2004). Mineral exploration and development are an important source of jobs, especially in the summer months, providing regular seasonal work for many Tahltan members. The TNDC is involved in various mining related contracts in the region, from road construction and heavy equipment to catering services for work camps.

In recent years Tahltan have been involved in the exploration, development, and/or operation of the Eskay Creek, Cassiar, Golden Bear, and Galore Creek mines among others. According to the SNDS survey 35% of jobs between both the Tahltan Indian Band and the Iskut Band were in mining and exploration in 2006, up from 25% in 2003 (SNDS 2007). Although more recent data is not available the closure of the Eskay Creek Mine in 2008 led to a sharp decline in the number of Tahltan employed in this sector.

Tahltan employment in other resource sectors, including forestry and fishing, is far less significant providing a combined total of five jobs in 2006 or 2.5% of the employed Tahltan workforce, all of them from the Iskut Band (SNDS 2007). Similarly, tourism provides only a modest number of jobs for members of the Tahltan Nation. According to the SNDS survey only five Tahltan members living in one of the three communities had a job in tourism in 2003 and by 2006 only two were employed in the sector (SNDS 2007).

The SNDS surveys did not include non-Aboriginal members of the Dease Lake community and surrounding vicinity. Furthermore, Statistics Canada data does not break down employment sectors in the same way as the SNDS survey did, hence comparisons are effectively impossible. Nevertheless, according to Statistics Canada categories (see Table 8.2-1) public sector and mine related occupations are the principal employers for both Aboriginal and non-Aboriginal residents.<sup>23</sup>

According to Statistics Canada, jobs related to primary industry and trades, transportation, and equipment operations were most predominantly held by men, whereas education and government service jobs were mostly held by women (Statistics Canada 2007a).

### **8.2.2 Stewart and the Highway 37 Settlements**

The Huckleberry Mine and regional forestry activities continue to provide some employment for residents. Logging activities and associated employment have reportedly slowed over the past few years, while increased employment opportunities have become available in summer months with mineral exploration activities throughout northwest BC (A. Danuser and S. McFee, pers. comm.). Eskay Creek Mine was also an important economic contributor and employer until its closure in April 2008. The transportation sector also employs a number of residents, primarily with local trucking companies

---

<sup>23</sup> Public sector employment, public service jobs are counted in: Health care and social services, Educational services, and Other services. Whereas mining and mine exploration are counted under: agriculture and other resource based industries, construction, manufacturing, and to a certain degree, business services.



involved in transport of ore concentrate and logs. Stewart Bulk Terminals, which serves as the shipment facility for ore from regional mines, also offers a limited number of jobs.

Industry-related occupations account for around half of the local employment in Stewart in 2006. This includes 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 3% for primary production labourers (BC Stats 2009b). According to Statistics Canada census categories (see Table 8.2-1) key industries for employment in 2006 were business services (17%), construction (12%), resource-based industries (12%), followed by 8% for health and social services (Statistics Canada 2007b).

Tourism is an increasingly important local industry although economic activity is prone to fluctuation as many tourism oriented businesses are based on seasonal outdoor activities including fishing, hiking, heli-skiing, snowmobiling, and hunting. Community services and facilities in Stewart include a restaurant, gas station, gift shop, and hotel, some of which shut down for the winter due to the lack of activity. Loss of services is a concern for the community (A. Danuser and S. McFee pers.comm.).

### 8.2.3 Nisga'a Nation

#### Local Business

NLG has created the Nisga'a Commercial Group to support and promote Nisga'a Nation's business and cultural interests and eco-adventure-base-operations, including forestry, fishing, Nisga'a Eco-Adventure Tours, Lisims Backcountry Adventures, Hayatsgum Gibuu Tours, Master Carver Alvert Tait, True North Adventures, and Nisga'a Salmon Lodge Bed and Breakfast (NLG n.d.-c). Nisga'a forestry businesses sell both timber and non-timber products (such as pine mushrooms) to various markets through Lisims Forest Resources LLP. Fisheries is potentially the most important natural resources industry. It includes food and commercial fisheries. Nisga'a commercial fishers access external markets through Nisga'a Fisheries Ltd. Nisga'a telecommunications are run by enTel Communications Inc., a Nisga'a-owned business that is also helping other First Nations communities in the region gain access to high-speed internet (enTel Communications Inc.; NLG n.d.-c). Nisga'a are also finding ways to capitalize on resource development activity, for example through land leases (NLG N.d.-d) and contract work related to the construction and operation of the NTL (BC Hydro 2012b).

In their 2006 Labour Market Census, the SNDS reported that 63 businesses were located in Nisga'a villages (SNDS 2007). The distribution of these businesses is summarized in Table 8.2-2. Many of these are small, independent enterprises including artists and small-scale retail and/or service providers that cater mainly to the local economy or the tourism and recreation sector (SNDS 2007). While individually these businesses are quite small, they nonetheless make an important contribution to the local economy.

**Table 8.2-2. Businesses Located in Nisga'a Villages, 2006**

Nisga'a Villages	Privately Owned	Communally Owned	Artists	Total
Gitlaxt'aamiks	12	11	7	30
Gitwinksihlkw	4	1	No Data	5
Laxgalts'ap	6	4	3	13
Gingolx	5	3	7	15
<b>Total</b>	<b>27</b>	<b>19</b>	<b>17</b>	<b>63</b>

Source: SNDS (2007)

A study of Nisga'a- or NLG-owned businesses carried out in 2011 surveyed 22 enterprises which ranged from accommodation and catering to construction and transportation, as well as a variety of village government enterprises and public services (Rescan 2012c). Over half of these businesses were single proprietorships and more than a third were owned and operated by one of the four Nisga'a village governments.

The majority of surveyed businesses (75%) reported fewer than 5 employees, while the top four businesses reported 129, 42, 40, and 21 employees (Rescan 2012c). The client base of these businesses was dominated by NLG or Nisga'a village governments. Over two-thirds (68%) of the businesses reported more than half of their business coming from either or both levels of local Nisga'a government.

#### Nisga'a Employment by Sectors

Almost 65% of employment on Nisga'a Lands was provided by the public sector (SNDS 2007), mostly for NLG or one of the village governments. Fishing, employed 11.5% of the labour force. Other natural resource industry employment included forestry (3%) and mining (0.7%).

According to Statistics Canada (Statistics Canada 2006(Statistics Canada 2007b), key industries in most communities included educational services, health care and social services, agriculture and other resource-based industries, followed by business services and construction (Table 8.2-1). But as noted at the beginning of section 8.2 the category of 'other services' is the most prevalent employment sector for approximately one third of the labour force in those communities for which data was available (Statistics Canada 2007b).

#### **8.2.4 The Hazeltons and Skii km Lax Ha, Gitxsan, and Gitanyow First Nations**

Skii km Lax Ha does not have a geographically defined reserve community and subsequently statistical data on key industries and occupational sectors is not available for Skii km Lax Ha. Hence this group is included in the general discussion of the Hazeltons where most members of Skii km Lax Ha reside and/or the Gitxsan reserve communities, especially Gitanmaax, where other Skii km Lax Ha also live.

#### Local Business

Most local businesses are located in New Hazelton and the Village of Hazelton including a gas station, several restaurants, a bakery, café, a hardware/building supply store, tire shop, and some limited industrial supplies. Businesses on IRs include small retail operations such as a gas station with a small convenience store.

The Kispiox Band is attempting to establish a fish guiding and cultural tourism business in an attempt to capture some of the tourism revenue associated with the world renowned steelhead runs on the Kispiox River. The tourism potential of this resource is an as-yet-untapped economic opportunity for their communities (B. Williams, pers. comm.).

Tsetsaut Ventures Ltd. is owned by the Skii km Lax Ha it provides contract employment opportunities for the Skii km Lax Ha, Gitxsan and other residents in the Hazelton area. It supports mineral exploration such as the construction and transport of core boxes, as well as providing workers and services for both the KSM and Brucejack projects. Although employment or contract information is not available for Tsetsaut Ventures Ltd. it is reported that the company has secured contract positions for approximately 100 residents of the Hazelton area including both Aboriginal and non-Aboriginal persons (Brucejack Project Research Program 2013).

In July 2012, Tsetsaut and the Gitxsan Development Corporation signed a Cooperation Agreement to facilitate the employment of 25 Gitxsan to harvest timber, clear vegetation, and carry out environmental monitoring for the NTL Project (GDC 2012).

Gitanyow offers a small number of locally based forestry- and fishing-related services (Rescan 2012a). Local commercial services include a local gas bar, convenience store, and museum, though residents rely on Terrace and Hazelton for most retail services. The Gitanyow Band Office, GHCO, and Gitanyow Health Services are based in the community and provide an important source for local employment.

### Employment by Sector

A variety of different industries act as key employment sources in the Hazelton area, with the mix of industries varying slightly among communities. Industries that were prominent employers across communities in the Hazelton area in 2006 included agriculture and other resource industries (especially forestry), health care and social services, business services, and ‘other services’ (Statistics Canada 2007b)<sup>24</sup>. Males were more commonly employed within business, agriculture, and other resource industries, while females were more likely to be employed in health care and social services industries.

Health care and social services, other services, education, and agriculture in the District of New Hazelton, accounted for 22%, 20%, 18%, and 15%, respectively, of the workforce in 2007 (Statistics Canada 2007b). According to New Hazelton municipal government office, local employers accounted for approximately 50% of employment. This includes: government, schools, RCMP, First Nations, and Northern Health (P. Weeber and B. Faasnidge. pers. comm.).

In the Village of Hazelton (i.e. “old” Hazelton) the business services industry accounted for 24% of the labour force, followed by health care and social services (22%), manufacturing (15%), and other services (15%). The tourism industry provides summer employment, particularly for youth (A. Maitland and B. Smith, pers. comm.). According to the mayor of the Village of Hazelton, the main employers and employment sectors are First Nations government, other government, the hospital and health services, and the school district (Brucejack Project Research Program 2012c). In other words, what is not necessarily revealed by the census data is the fact that public sector jobs and other forms of government transfer payments are a critical component of household livelihoods and the local economy.

Overall, approximately one third to one half of Gitxsan community residents identify themselves as employed in industries classified by Statistics Canada as “other services” (Statistics Canada 2007c), compared to just over 4% for the province. The reason behind the high percentage is not clear, but may be related to public sector jobs provided through band offices and/or the Gitxsan Hereditary Chiefs office. This conclusion is supported by SNDS research (SNDS 2007), which found almost 54% of the employed population worked in the public sector. According to census data, the second most important employment sectors include education, health care and social services, and agriculture and resource based industries (Statistics Canada 2007b).

The SNDS study found that, after the public sector, another quarter of the employed workforce had jobs in the forestry sector (SNDS 2007). Fisheries and tourism represented 2% of the employed population each, while a variety of other sectors employed another 16% of the employed workforce. According to the SNDS study this represents a substantial turnaround from 2003 when approximately 92% of the Gitxsan employed population reportedly worked in the public sector and only 7% in forestry (SNDS 2007).

---

<sup>24</sup> “Other services,” as defined by the North American Industry Classification System include repair and maintenance, religious, personal care, etc. See discussion at the beginning of Section 8.2.

Reasons given by community representatives for unemployment were lack of education, training, and skills; dependency on social assistance; lack of incentive; lack of job opportunities; and a weak local economic base that has been undermined by recent decline of the forest industry and (at the time of writing) closure of the Kemess South mine in the region (SNDS 2007).

According to Statistics Canada (2007b) the Gitanyow labour force is diversified across a variety of sectors. Business services and manufacturing each comprised over 13% of the labour force while agriculture and other resource-based industries, construction, retail trade, health care and social services, as well as educational services each accounted for almost 9% of Gitanyow's labour force in 2006 (Statistics Canada 2007b). Almost 22% of the workforce also worked in a number of other services.

In both 2001 and 2006, males were primarily employed in agriculture, construction and manufacturing, business services as well as wholesale trade, and retail trade. The female labour force was focused in the health and education services and other service industries (Statistics Canada 2002b, 2007a).

By contrast, both the SNDS (SNDS 2007; Marsden 2010) and the *Gitanyow Wilp-based Socio-cultural Needs Assessment* (Marsden 2010) reported that most of the employed population (54 and 67% respectively) worked in the public sector, with the main employers being the Gitanyow Independent School, the health clinic, and Band Office (A. Derrick, pers. comm.). The SNDS reported forestry as the next most important sector with 25% of the workforce. Fisheries and tourism were reported to have 2% of the employed population each and a variety of other sectors employed 16% of the population. By comparison, forestry and mining were similarly reported as the second most important sector in the *Gitanyow Wilp-based Socio-cultural Needs Assessment*, but comprising only 13% of the employed population (Marsden 2010). Recreation, culture, and sales accounted for 8%, processing and manufacturing another 6%, with both transportation and construction rounding out the final 6%.

### 8.2.5 Smithers

#### Local Business

There is a range of businesses operating in Smithers, including a variety of retail stores, gas stations, restaurants, health services, and wholesale trade. The community has two shopping malls, the Bulkley Valley Credit Union, and three major commercial banks. Invest BC identifies 22 other key support service businesses, including, four tool and die companies, three machine shops, four welders, two office equipment firms, one import/export broker, one courier company, four freight forwarders, and one translation firm (Invest BC 2010).

In addition, Smithers has various infrastructure services that support the regional economy, including the Smithers Municipal Airport, which is an important hub for the movement of goods and people into the northwest. Air Canada, Central Mountain Air, Northern Lights, Canadian Helicopter, Hawk Air, Highland Helicopter, Northern Thunderbird Air, and Sustut Air all use the facilities. The Town of Smithers has a very limited industrial land base but does own land adjacent to the airport, which it is looking to make available for industry. The Smithers Regional Airport Business and Land Use Plan includes plans to expand water and sewer services to create space for approximately 12 commercial or light industrial lots (Brucejack Project Research Program 2012a).

#### Employment by Sector

The provision of services, from health care to business support services, constitutes the largest area of employment, representing approximately 59% of jobs (Statistics Canada 2007b). Within the service sector, retail trade and food/accommodation account for a large number of jobs, reflecting Smithers' role as a service centre. Table 8.2-3 outlines some of the leading employers in Smithers.

**Table 8.2-3. Select Smithers Area Businesses and Employment, 2010**

Sector	Employer	Product/Service	#Employees
Health care and social services	Northern Health Authority (Smithers)	Health care	400
Education	School District #54	Education	400 <sup>1</sup>
Manufacturing	Pacific Inland Resources	Lumber	191
Automotive	Northwest Autodealers (association)	Automotive	150 <sup>1</sup>
Retail	Canada Safeway	Grocery	115
Accommodation and food	Boston Pizza	Restaurant	60
Government	Ministry of Environment	Provincial government	60
Health care and social services	Smithers Community Services	Community services	50 <sup>1</sup>
Finance	Bulkley Valley Credit Union	Financial services	50 <sup>1</sup>
Recreation and real estate	Hudson Bay Mountain	Ski hill/real estate	50 <sup>1</sup>
Retail	Canadian Tire	Auto/consumer goods	40
Other	Bulkley Valley Pool	Recreation	28
Transportation and warehousing	Bandstra Transportation	Trucking	15

Source: Invest BC (2010); <sup>1</sup> H. Gallagher, pers. comm.

Primary resource extraction, including agriculture, accounted for over 11% of total employment, up from 6.5% in 2001 (BC Stats 2007b; Statistics Canada 2007b). Secondary use of resources, including manufacturing and construction, represents an additional 11%. The largest proportion of forestry-related employment was in manufacturing industries (7.1%; BC Stats 2007b).

Table 8.2-1 displays the 2006 census data for industry in Smithers by labour force. As has been the case in other LSA communities, the industry category with the largest concentration of the experienced labour force is “other services.”

### 8.2.6 Terrace

#### Local Business

There are a range of businesses 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, five machine shops, 10 welding shops, three office equipment firms, a temporary employment agency, an import/export broker, and several firms dealing in transportation and shipping (Invest BC 2010). Overall, the economy is well diversified, with a strong base in a variety of services and industries (BC Stats 2007c).

Several businesses in Terrace supply the mining industry with a wide range of support services and materials including communications, heavy-duty equipment repair and maintenance, helicopter services, bulk fuel storage, drilling contractors, explosives, and trades contractors. Although less significant than the Smithers-Houston area, mineral exploration in the region in 2007 is estimated to have contributed almost \$3 million in indirect economic expenditures in the Terrace service industry (Chan and Hancock 2008).

Tourism is an important contributor to Terrace and the regional economy, as reflected in the growing number of tourism-oriented businesses and services in the area. Annual visits have increased since the

late 1990s, reaching a peak of 99,062 in 2004 (Rescan 2009). Both the Terrace Tourism Society and the City of Terrace in its Official Community Plan have identified further development of the tourism sector as a priority.

Employment Sectors

The City of Terrace is a prominent regional service centre: 30% of the local workforce is employed in services with an additional 13% in administrative and clerical roles (NDIT 2010a). In 2006, the city also had high levels of employment for labourers, machine operators, sales, management and technical positions (BC Stats 2007c). More recently, however, TEDA reports that nearly half of the labour force in Terrace is made up of management, professional, technical, and highly skilled occupations (TEDA 2011), with demand for skilled trades increasing (Brucejack Project Research Program 2012b). Table 8.2-4 outlines some of the leading employers in Terrace.

**Table 8.2-4. Terrace Businesses and Employment, 2010**

Employer	Product/Service	#Employees
School District #82	Public Education	721
Northern Health Authority	Health	650
Wal-Mart	Retail	230
Northwest Community College	Education	218
Safeway	Retail	145
City of Terrace	Public Services	140
Canadian Tire	Retail	91
Save-on-Foods	Retail	90
McDonald's	Restaurant	89
Terrace Totem Ford	Auto Dealership	70
Tim Horton's	Restaurant	67
Northern Motor Inn	Accommodations	60
Real Canadian Wholesale	Retail	50
Northern Savings Credit Union	Financial Services	44

Source: TEDA (2010a).

## 9. Labour Force and Employment

## 9. Labour Force and Employment

### 9.1 REGIONAL STUDY AREA

The total potential labour force (i.e., anyone 15 years and older) within the RSA was almost 34,000 in 2006, with an active labour force of approximately 22,500. The active labour force counts those people who were actually employed or were unemployed but available to work. Persons not considered to be in the active labour force include students, homemakers, retired workers, seasonal workers in an “off season” not looking for work, and persons unable to work because of a long-term illness or disability (Statistics Canada 2007b; Table 9.1-1). The labour participation rate is simply the expression of the active labour force as a percentage of the total potential labour force.

**Table 9.1-1. Regional Study Area Labour Force Characteristics by Community, 2006**

Jurisdiction/ Community	Total Population 15 years+	In the Labour Force <sup>1</sup>	Participation Rate (%)	Employment Rate (%)	Unemployment Rate (%)	Comments
British Columbia	3.39M	2.22M	66%	62%	6%	
RDBN Electoral Area A	4,200	3,190	76%	71.2%	6.3%	
RDKS	29,740	19,340	65%	56%	14%	Not quite equivalent to RSA - includes Kitimat, excludes Smithers (i.e., Electoral Area A, RDBN)
Dease Lake	295	275	93%	88%	5.5%	Strong improvement from 2001 when participation rate was 88% and unemployment stood at 23%
<i>Tahltan Nation reserve communities</i>						
Dease Lake IR 9		30	67%	44%	33%	Data based on SNDS data and categories. Both participation rate and unemployment rate considerably higher for Tahltan Indian Band vs. Iskut Indian Band
Iskut IR 6		160	67%	51%	24%	
Telegraph Creek IR 6						
Telegraph Creek IR 6A						
Guhthe Tah IR 12 (Telegraph Creek)		70	56%	44%	20%	
Stewart	385	305	79.2	72.7	8.2%	
<i>Nisga'a Nation communities</i>						
Gitlaxt'aamiks	605	400	66%	50%	26%	Stats Canada data suppressed, numbers here from SNDS (2007)
Gitwinksihlkw	155	115	74%	58%	26%	
Laxgalts'ap		285	92.8	46%	54%	
Gingolx	245	150	61%	33%	47%	
Hazelton	275	195	71%	67%	5.1%	
New Hazelton	475	335	71%	57%	19%	

(continued)



Table 9.1-1. Regional Study Area Labour Force Characteristics by Community, 2006 (completed)

Jurisdiction/ Community	Total Population 15 years+	In the Labour Force <sup>1</sup>	Participation Rate (%)	Employment Rate (%)	Unemployment Rate (%)	Comments
<i>Gitxsan Nation communities</i>						
Gitanmaax	540	290	54%	35%	36%	Participation, employment and unemployment trends varied within Gitxsan communities.
Gitsegukla	495	210	42%	27%	36%	
Gitwangak	340	195	57%	34%	44%	
Glen Vowell	160	80	50%	34%	38%	
Kispiox	440	235	53%	32%	40%	
Smithers	3,975	2,830	71%	65%	8.5%	30% growth in pop. over 15 yrs. Participation dropped moderately but unemployment rate improved
Terrace	8,735	5,995	69%	62%	9.3%	26% growth in potential working age pop.; as with Smithers, participation rate declined slightly but unemployment dropped by more than a quarter from 2001 (13.5%)

Source: SNDS (2007), Statistics Canada (2007b)

The labour participation rate is a useful comparative measure of the people engaged in work or who are looking for work. The labour participation rate at just over 66%, is effectively the same as that of the province as a whole (Statistics Canada 2007b). The other expressions of labour force activity and employment used in this report are employment and unemployment rates. These two measures of labour force activity do not add to 100% because they are measured against the total population 15 years or older, which as noted, includes people who are not in the active labour force. Thus, while a low employment rate, or a high unemployment rate, is a concern and points to a lack of jobs, a low participation rate is a different concern because it suggests that people have, for one reason or another, removed themselves from the labour force. Often a low participation rate can suggest not just the lack of jobs, but the lack of hope for a job as well.

RSA labour force and employment data are presented separately for the RDKS and for Electoral Area A of the RDBN as these results indicate differences in trends not evident within aggregated figures.

In 2006, Electoral Area A of the RDBN - data for which is heavily influenced by the Town of Smithers - showed an exceptionally high labour participation rate, ten points higher than the provincial average (Table 9.1-1). Employment was similarly well above the provincial rate and the rate of unemployment was close to that of BC as a whole. The RDKS, on the other hand, exhibited a participation rate on par with the province but employment lagged several percentage points behind the province and unemployment was more than double that of BC as a whole (Statistics Canada 2007b).

Of the communities that comprise the LSA, it is noteworthy that for the most part it appears people want to work (strong labour participation rate) but are not always able to find work (high unemployment rates, especially in Aboriginal communities). The labour participation rates in the Gitxsan communities stand out because, in 2006 at least, participation was well below the provincial average and the unemployment rate was also exceptionally high.

Collectively, the total unemployed population in 2006 hovered around approximately 3,000 people: almost 13% of the active labour force within the RSA (BC Stats 2009c). Exacerbated by the global economic downturn of 2008 to 2009, the region has persistently had one of the highest rates of unemployment in the province (ICABC 2009, 2013).

More recently, economic prospects have improved with increased resource exploration, infrastructure development, and related activity, especially in centres such as Smithers and Terrace, but ultimately in the smaller, more outlying communities of the LSA as well.

## 9.2 LOCAL STUDY AREA

Table 9.1-1 provides a summary of the LSA communities' labour force characteristics for 2006 relative to other communities, regional districts, and the province.

### 9.2.1 Dease Lake and the Tahltan Nation

The total potential labour force in Dease Lake (UNI) in 2011 (i.e., population 15 years of age and over) comprised 230 persons, a 23% decline from the 295 total in 2006 (Statistics Canada 2002d, 2008, 2012b). The active labour force in 2006 comprised 275 persons. In 2006, the participation rate for Dease Lake was over 93% and the employment rate exceeded 88%, an increase from 2001 which indicates positive economic activity during this period. Rates were high for both men and women in Dease Lake relative to the province, with men reporting higher participation and employment rates than women. By comparison, the RSA's participation and employment rates were over 66 and 63%, respectively (Statistics Canada 2002d, 2008, 2012b). Unemployment was reported at 5.5%, below provincial and RSA rates in 2006 (6 and 10% respectively) and an improvement over the 23% unemployment rate in 2001. No females reported unemployment in 2006.

For the Tahltan communities, the figures from both SNDS and Statistics Canada indicated a 2006 active labour force of comparable size at 251 and 260 persons, respectively (Table 9.1-1). Participation rates varied from 56% in Telegraph Creek to 67% in Iskut (Statistics Canada 2007a), whereas SNDS reported notably higher participation rates<sup>25</sup> ranging between 76 and 89% (SNDS 2007). As a result of declining population, the total number of individuals of labour force age (i.e., potential labour force) declined between 2006 and 2011, from 425 to 325, while the proportion of the population of labour force age remained the same at 75% (Statistics Canada 2007a, 2012b). Additional labour force data from the 2011 census was unavailable at the time of writing.

By comparison, the Tahltan Census reports that 88% of Tahltan residents (aged 18 years and over) were employed in 2007, with 48% working full-time, 14% part-time, and 18% seasonally (Rescan 2013c). Only 12% of the population reports being unemployed, a rate notably lower than reported in 2006 by Statistics Canada and the SNDS (SNDS 2007; Statistics Canada 2007a). Data on participation rates were not provided.

Participation rates in Dease Lake and Iskut were comparable to the RDKS and province, while Telegraph Creek had a lower overall rate. Males had higher rates of participation than females across all Tahltan communities, whereas females had higher employment rates in both Telegraph Creek and Iskut. Employment rates in all communities were lower as compared to the RDKS and the province which may, in part, be due to the seasonal nature of certain employment in the region (Statistics Canada 2007a).

<sup>25</sup> Estimates of labour force participation, employment and unemployment varied between sources (i.e., Statistics Canada and the SNDS) and may be due to differences in data definitions, survey methods, and/or participation.

Unemployment rates were notably higher in the Tahltan communities than the RDKS and province. The unemployment rate was highest for Dease Lake 9 (33%) which, in 2006, was more than five times higher than the provincial rate of 6.0%, and more than two times higher than that for the RDKS (Statistics Canada 2007a). Rates of unemployment among males were notably higher than females in all three Tahltan communities.

According to the SNDS, Tahltan residents attributed unemployment in their communities to a dependence on seasonal work opportunities, a lack of education and training, a weak economic base, low self-esteem, and a lack of economic planning (SNDS 2007).

### 9.2.2 Stewart

Stewart’s potential labour force in 2011 amounted to 405 people, a slight increase from the 385 reported in 2006 (BC Stats 2009b; Statistics Canada 2012b). By comparison, its active labour force was 305 in 2006 and 390 in 2001, respectively. The community’s 2006 employment and participation rates, at 74 and 79% respectively, improved over 2001 figures and were notably higher than provincial and RSA averages (Statistics Canada 2007b). Table 9.1-1 provides an overview of Stewart’s labour force characteristics in 2006.

Stewart reported an unemployment rate in 2006 of 8%, considerably lower than the 2001 rate of 24% and slightly higher than the provincial average of 6% (Statistics Canada 2007b). In contrast, the RSA’s unemployment rate was 10%. All unemployed individuals were male. Notably, the 2006 labour force was both smaller and more likely to be employed than in 2001, suggesting that those without work left the community to seek employment opportunities elsewhere.

### 9.2.3 Nisga’a Communities

Economic and employment data specific to Nisga’a Lands are unavailable in the 2011 census. Data from 2006 is provided from two distinct sources, which are not entirely comparable.<sup>26</sup> According to the SNDS 2006 Labour Market Census, the total active Nisga’a Nation labour force at that time was 973, with the participation rate for individual communities ranging from 84 to 95% (Table 9.2-1; SNDS 2007). Approximately 58% of the total labour force reported being employed, with Gitwinksihlkw reporting the highest employment rate (82%) and Laxgalts’ap reporting the lowest (46%). Of those employed, 57% reportedly worked full time while 26% were seasonally employed and 17% employed part-time. Seasonal employment, including pine mushroom picking, forestry, and fishing, was lowest in Gingolx (11%) and highest in Laxgalts’ap (36%; SNDS 2007).

**Table 9.2-1. Nisga’a Nation Participation and Employment Rates: SNDS 2006**

Nisga’a Village	Active Labour Force	Employment Rate (%)	Participation Rate (%)	Unemployment Rate (%)
Gingolx	159	52.8	84.1	47.2
Gitlaxt’aamiks	425	62.6	94.9	37.4
Gitwinksihlkw	104	81.7	94.5	18.3
Laxgalts’ap	285	46.0	92.8	54.0
<b>Total</b>	<b>973</b>			

Source: SNDS (2007).

<sup>26</sup> Estimates of labour force participation, employment and unemployment varied between sources (i.e., Statistics Canada and the SNDS) and may be due to differences in data definitions, survey methods, and/or participation.

In comparison, 2006 census data reports a cumulative active labour force of approximately 665 people in three communities, as labour-related data from Laxgalts'ap were not available (Statistics Canada 2007b). Participation in the labour force remained relatively high, ranging from 61% in Gingolx to 74% in Gitwinksihlkw, but notably lower for each village compared to SNDS data (Tables 9.1-1 and 9.2-1). Participation rates were higher than the provincial average of 65.6, with the exception of Gingolx. Employment rates were also lower than SNDS figures and varied from a low of almost 33% in Gingolx to 58% in Gitwinksihlkw (Statistics Canada 2007b).

Estimates of unemployment in the four Nisga'a villages from both sources were substantially above the provincial unemployment rate of 6%. The SNDS, for instance, reported unemployment above 37% for all communities, with the exception of Gitwinksihlkw at 18% (SNDS 2007). Including all four villages, the SNDS estimated that approximately 400 Nisga'a citizens were unemployed in 2006. By comparison, 2006 census data estimated unemployment at around 25% in Gitlaxt'aamiks and Gitwinksihlkw, and over 40% in Gingolx (Statistics Canada 2007b).

A weak economic base and the lack of job opportunities were the most common reasons cited for unemployment. Other reasons cited included a lack of education, skills, and training; seasonally restricted employment; limited local funding; nepotism; and lack of incentive due to dependency on social services (Rescan 2012b, 2012c).

#### **9.2.4 The Hazeltons and Skii km Lax Ha, Gitxsan Nation, and Gitanyow First Nation**

##### The Hazeltons

The total cumulative potential labour force for both Hazelton and New Hazelton was roughly 750 according to both 2006 and 2011 census data, which is consistent with the relative stability in population over this time frame (Statistics Canada 2007b, 2012b). In 2006, 530 persons comprised the active labour force. Participation rates of roughly 71% in both New Hazelton and Hazelton were above the provincial and RSA rate of 66%, respectively (Statistics Canada 2007b).

Employment rates in the two communities showed a greater disparity; New Hazelton had a 57% employment rate as compared to 67% in Hazelton. By comparison, the RSA's employment rate was over 63%. Table 9.1-1 provides an overview of 2006 labour force data for these two communities relative to other communities, regional districts, and the province.

Labour force participants from Hazelton area communities reported limited full-time work (P. Weeber and B. Faasnidge, pers. comm.; A. Maitland and B. Smith, pers. comm.). Unemployment rates for 2006 in the Hazelton communities varied. Hazelton reported a low unemployment rate of 5% compared to 19% in New Hazelton and 10% for the broader RSA (Statistics Canada 2007b). Reasons for this disparity are unclear.

##### Skii km Lax Ha

The majority of Ski km Lax Ha members currently live in the Village of Hazelton. Those in the active labour force are employed by Tsetsaut Ventures Ltd., fulfilling various support contracts negotiated with mining proponents including Pretium Resources Inc. According to baseline studies completed in support of the NTL Project, the Skii km Lax Ha had a labour force of 12 people in 2009 (Rescan 2009). Tsetsaut Ventures reports that they have placed approximately 100 people in mine related jobs as of June 2012 (Brucejack Project Research Program 2013).

### Gitxsan

In 2006, these five communities had an average participation rate of 50%, an employment rate of 30%, and an unemployment rate of 39% (Statistics Canada 2007a). Labour force participation rates in the Gitxsan communities were relatively low, ranging from 42.4% (Gitsegukla) to 57.4% (Gitwangak). Table 9.1-1 provides further details. Employment rates were almost half the provincial average in these communities, reported to be lowest in Gitsegukla (27.3%) and highest in Gitanmaax (35.2%; Statistics Canada 2007b).

Unemployment rates decreased between 2001 and 2006 in Gitanmaax, Gitsegukla, and Glen Vowell. Gitwangak and Kispiox experienced increases in unemployment over the same time period. The most noticeable decrease occurred in Gitsegukla where the unemployment rate dropped by over 20% (Statistics Canada 2007a). Overall, unemployment rates in the Gitxsan communities remain notably higher as compared to the provincial rate of 8%. In 2001, males had higher rates of participation in the labour force as compared to females. The difference ranges from approximately 10 to 20 percentage points. Most unemployed individuals in the communities are male. According to interviews conducted during baseline studies, the Gitxsan community is considered impoverished and in need of jobs (Brucejack Project Research Program 2012c).

#### **9.2.5 Smithers**

The potential labour force in Smithers grew from 3,975 in 2006 to 4,290 in 2011, slightly more than the total population increase during this same period (Statistics Canada 2007b, 2012b). Additional labour force characteristics for 2011 are unavailable.

The active labour force in 2006 was 2,830 with a participation rate of 71%, higher than the provincial and RSA averages of 66%, though a slight decrease from the community's 2001 participation rate (Table 9.1-1; Statistics Canada 2007b). Similarly, the community's 65% employment rate was higher than rates for both the province (62%) and RSA (63.5%). Participation and employment rates were generally higher among males.

The 2006 unemployment rate in Smithers (8.5%, or approximately 240 people) was higher than that of the province (6%), though lower than the RSA's 10%, and marked no major change since 2001. Unemployment was more prevalent among women than men (Statistics Canada 2007b).

#### **9.2.6 Terrace**

According to Statistics Canada, the potential labour force in Terrace totalled 8,735 in 2006 and increased to 9,180 in 2011 (Statistics Canada 2007b; NDI 2010a; Statistics Canada 2012b). The active labour force has also grown since 2001 to reach 5,995 in 2006, or a participation rate of almost 69% and employment rate of 62%. These levels are similar to provincial rates in 2006 (Statistics Canada 2007b). Although 2011 data are unavailable, it is anticipated that participation and employment rates have benefited from the level of economic and major project investment in the region in recent years (Section 7.2). Table 9.1-1 provides an overview of labour force characteristics for 2006.

The unemployment rate in Terrace was 9.3% in 2006 (NDI 2010a), higher than provincial rates (6%) and Smithers (8.5%), but lower than the 10% unemployment rate within the RSA (Statistics Canada 2007b). According to TEDA, the 2010 unemployment rate was a low of 3.7% (TEDA 2011). Large projects such as the construction of the NTL, port expansion projects in Prince Rupert and Kitimat, as well as increased mineral exploration and forestry activities, have likely contributed to the lowering of the city's unemployment rate (Brucejack Project Research Program 2012b).

## 10. Income and Earnings

# 10. Income and Earnings

## 10.1 REGIONAL STUDY AREA

Average household income and earnings in the RSA are relatively high compared to the rest of the province, largely due to the prominence of the resource sector which traditionally pays better wages than other sectors such as tourism. The cost of housing and distribution of income are also relatively better with a lower percentage of income going to housing in both the RDKS and the Smithers LHA than province wide and a greater portion of total earnings going to the poorest 20% than the average for the province (BC Stats 2011c). On the other hand, dependence on the resource sector is also known to increase local economic vulnerability to swings in commodity prices and economic cycles that characterize primary resource industries. Relatively high levels of dependence on government income assistance are also indicative of potential weaknesses in income security in the RSA (BC Stats 2011c).

Annual median earnings in 2005 for all residents over 15 years of age, including part-time and seasonal workers in the RDKS and Electoral Area A of the RDBN, were on par with the province (Table 10.1-1; Statistics Canada 2007b). Similarly, annual full-time median earnings were either on par with or above the provincial figure.

**Table 10.1-1. Regional Study Area Income Characteristics, 2005**

Characteristics	RDKS	RDBN Electoral Area A	British Columbia
People 15 years of age and over with income (#)	27,705	4,025	2,392,805
Annual median earnings	\$25,062	\$24,162	\$24,722
Annual full-time median earnings	\$47,395	\$42,509	\$42,230
• Males	\$59,832	\$47,270	\$48,070
• Females	\$36,538	\$33,960	\$36,739
Composition of total income (%)			
• Earnings	77.6%	81.4%	75.1%
• Government transfers	13.6%	9.9%	10.7%
• Other money	8.8%	8.6%	14.2%

Source: Statistics Canada (2007b).

By comparison, the average family income for northwestern BC in 2005 was \$68,985, or \$75,957 for couple parent economic families and \$34,596 for female lone parent households. Average wages are likely the result of employment in resource industries, including mining and forestry, which typically pay higher wages than other sectors. There a large discrepancy between male and female incomes across the labour force in the RSA with males in 2005 reporting almost 40% more than the median income of females (BC Stats 2011b).

Income dependency within northwest BC on the primary sector is relatively high. In 2005, almost 33% of incomes in the northwest relied on forestry, mining, and fishing, compared to the provincial average of 11% (BC Stats 2011b).

Earnings from employment composed between 77.6 and 81.4% of all income, which is high compared to the rate of 75% for BC overall. The share of total income from government transfers, however, was also high, especially in the RDKS, which at 13.6% of total income leads all other regional districts (Statistics Canada 2007b).

## 10.2 LOCAL STUDY AREA

### 10.2.1 Dease Lake and the Tahltan Nation

The average earnings among full-time workers in Dease Lake was almost \$47,000 in 2005, which compares favourably with both the province and RDKS, whereas total median earnings (including part-time and seasonal workers) at \$36,000 was notably higher than both the regional and provincial figures (Statistics Canada 2008). Table 10.2-1 provides an overview of community earnings and income for 2005. Employment income accounted for 94% of total earnings, with government transfer payments contributing the additional 6% (Statistics Canada 2008). Both figures compare favourably relative to regional and provincial estimates (Table 10.2-1). Approximately 9% of households were classified as low-income (BC Stats 2009a, 2010c).

**Table 10.2-1. Local Study Area Communities, Regional District of Kitimat-Stikine, and British Columbia Income Characteristics, 2005**

Community	Annual Median Earnings	Annual Full-Time Median Earnings	Earnings - As a % of Total Income	Government Transfers - As a % of Total Income	Other Money - As a % of Total Income
Dease Lake (UNI)	\$36,035	\$46,798	94%	6%	1%
Dease Lake 9	DS	DS	DS	DS	DS
Iskut 6	\$21,952	\$35,968	86%	15%	0%
Telegraph Creek 6	DS <sup>1</sup>	DS	DS	DS	DS
Telegraph Creek 6A	DS	DS	DS	DS	DS
Guhthe Tah 12 (Telegraph Creek)	DS	DS	DS	DS	DS
Stewart	\$26,223	\$38,190	81%	11%	8%
Gitlaxt'aamiks	\$14,989	\$38,528	78%	20%	3%
Gitwinksihlkw	DS	DS	DS	DS	DS
Laxgalts'ap	DS	DS	DS	DS	DS
Gingolx	\$8,721	\$39,040	60%	38%	2%
Hazelton	\$21,029	\$48,787	75%	17%	6%
New Hazelton	\$21,712	\$60,271	77%	18%	6%
Gitanmaax	\$12,459	\$33,984	66%	29%	5%
Gitsegukla	\$8,390	\$8,483	41%	55%	2%
Gitwangak	\$11,392	\$30,592	69%	29%	2%
Glen Vowell	DS	DS	DS	DS	DS
Kispiox	\$11,232	\$31,424	65%	31%	4%
Gitanyow	\$10,208	\$27,200	69%	30%	1%
Smithers	\$25,005	\$42,207	79%	12%	9%
Terrace	\$25,771	\$45,957	77%	13%	11%
Median for all LSA communities	\$19,284	\$37,488	73%	22%	5%
RDKS	\$25,062	\$47,395	78%	14%	9%
British Columbia	\$25,722	\$42,230	75%	11%	14%

Source: Statistics Canada (2007b).

Notes: DS = 'data suppressed'. Income data for Dease Lake 9's, Guhthe Tah 12, Telegraph Creek 6 and 6A, Gitwinksihlkw, Laxgalts'ap, and Glen Vowell are suppressed by Statistics Canada to protect the privacy and confidentiality of individuals.



With respect to the Tahltan communities, income and earnings data were only reported for Iskut in 2006 (Statistics Canada 2007a). Annual full-time median earnings for 2005 in Iskut were almost \$36,000, which is below that of both the province (\$42,230) and the RDKS (\$47,395).<sup>27</sup> Comparisons of total annual median earnings, which include part-time and seasonal income, show a much smaller earnings gap (Table 10.2-1).

Table 10.2-1 indicates that earning as a percentage of total income was higher in Iskut (86%) as compared to the RDKS (78%), and the province (75%). However, Iskut received a slightly higher percentage of income from government transfers as compared to the RDKS and the province.

### 10.2.2 Stewart

Income dependencies for Stewart in 2006 included 52% from public sector employment, 8% from mining and mineral processing, 7% from construction, 7% from tourism, 4% from fishing, and 3% from forestry (Horne 2009). The public sector dependency is the highest in the province, with a focus on education and local government work. Importantly, industry significance has changed considerably in the last decades with income dependence on mining dropping from 43% in 1991 to 8% in 2006. Likewise, income from forestry dropped from 25% in 1996 to 3% in 2006 (Horne 2009).

Annual median earnings of Stewart's labour force were \$26,223 (Statistics Canada 2007b), which was above the provincial median of \$25,722. Full-time median earnings amounted to \$38,190 annually, below the provincial full-time median of \$42,230 (Table 10.2-1). Full-time median income in 2006 dropped almost 13% from the previous census (2001), although annual median incomes remained almost unchanged, signalling a sharp drop-off in full time employment. Notably, male median and full-time median earnings were on average twice as high as female earnings.

While the proportion of income from government transfers remained effectively unchanged over the five-year period there was an almost five-fold increase in the percentage of income derived from "other sources" (Statistics Canada 2007b). On average, earnings comprised 81% of total income, while government transfers accounted for an additional 11%. In total, earnings constituted a larger portion of income in Stewart than provincially (75%).

### 10.2.3 Nisga'a Nation

Due to data suppression, income and earnings statistics from 2005 are only publically available for the two larger Nisga'a communities of Gitlaxt'aamiks and Gingolx (Table 10.2-1). Total median earnings in these two communities for persons over 15 years old, including full-time, seasonal, and part-time workers, is low; median earnings in Gitlaxt'aamiks (\$14,989) and Gingolx (\$8,721) were considerably lower than the provincial median of \$25,722 (Statistics Canada 2007b). There is also a marked difference between the median income of men which was lower by a third than that of women in Gitlaxt'aamiks and less by half in Gingolx. However, earning figures for those working full-year and full-time were notably better.

Full-time median earnings in both Gitlaxt'aamiks and Gingolx were approximately \$39,000, higher than the average for BC's Aboriginal population at \$34,600, and only slightly lower than the broader provincial figure of \$42,230 (Statistics Canada 2007b). This suggests that where Nisga'a citizens with full-time employment are doing comparatively well, the broader community may need to rely more on non-wage activities and government sources of income in order to meet household livelihood needs. Among full-time earners men make more than women especially in Gitlaxt'aamiks where the margin of

<sup>27</sup> Income information from the 2011 census was unavailable at the time of writing. 2006 data were only available for Iskut.

difference is almost 20% (Statistics Canada 2010). In 2005, earnings comprised between 60 and 78% of residents' income, with government transfers amounting to over 37% in Gingolx as compared to less than 11% for the province (Table 10.2-1).

#### **10.2.4 The Hazeltons and Skii km Lax Ha, Gitxsan Nation, and Gitanyow First Nation**

##### The Hazeltons

2005 annual median earnings in New Hazelton and Hazelton were both less than the provincial median of \$25,722. By comparison, full-time annual earnings at \$48,787 in Hazelton were marginally above the provincial average, and at \$60,271 in New Hazelton were almost 50% above regional and provincial averages (Table 10.2-1; Statistics Canada 2007b).

About three quarters of household income in New Hazelton and Hazelton was generated from earnings, which was on par with the province; however, households also received a relatively large portion of income (17%) from government sources, considerably higher than the provincial median (Statistics Canada 2007b).

##### Skii km Lax Ha

There are no income and earnings statistics available for the Skii km Lax Ha.

##### Gitxsan Nation Communities

Annual median earnings within each of the five Gitxsan communities are substantially below the provincial average of \$42,230 (Table 10.2-1). Government transfers also play a prominent role in household incomes, between 25 and 50% on average, compared to the province where government transfers account on average for just under 11% of income. In 2005, earnings comprised approximately two-thirds of residents' income in most Gitxsan reserve communities except for Gitsegukla where it was only 41% (Table 10.2-1).

##### Gitanyow

Annual full-time median earnings, representing income received as wage or salary, for Gitanyow were \$27,200 in 2005. This is much lower than the median earnings for the province (\$42,230). Earnings for males (\$30,848) were higher than females (\$24,896), with earnings representing over 69% of total income (more for males than for females). By comparison, annual median earnings including part-time and seasonal work were slightly over \$10,000 in the community. In contrast with full-time earnings, females earned almost twice as much as males (Statistics Canada 2007b).

Government transfers were a major source of income, representing almost 30% of total income within the community, almost three times higher than for the province.

#### **10.2.5 Smithers**

The annual median income level of residents over 15 years of age reported for Smithers in 2006 was \$25,000, on par with that of the province. Annual earnings for those who worked full-time all year approximated \$42,200, similarly aligned with the provincial figure. Male earnings exceeded provincial figures, while female earnings were lower (Statistics Canada 2007b). The community exhibits a large discrepancy between male and female earnings, with males reporting almost 38% more than the median earnings of females (Table 10.2-1). This gender divide is greater than that for the province.

Earnings from employment constituted 79% of all income and government transfers accounted for 12% (Statistics Canada 2007b).

### 10.2.6 Terrace

Annual median earnings from all employment were reported at \$25,771, which was almost identical to the provincial average (Table 10.2-1). Annual median earnings for those who worked full time all year was \$45,957, over \$3,500 greater than the provincial average. Both male and female median earnings in Terrace slightly exceeded the provincial averages (Statistics Canada 2007b). As with Smithers, there is a large discrepancy between male and female incomes in Terrace, with median income of men coming in at about 33% more than that for women. This gender divide is greater than that for the province.

The average family income in 2010 was over \$68,000, with almost 33% of families earning over \$80,000 (TEDA 2011). Earnings from employment constituted 77% of all income and the share of total income from government transfers was almost 13%, slightly higher than the province for both figures (Statistics Canada 2007b). In 2006, 14% of employment incomes were dependent on forestry, and 6% were dependent on mining and mineral processing, excluding the Rio Tinto Alcan operations in Kitimat (Horne 2009). This marks a shift from 1991, when 21% of incomes were reliant on forestry, and 14% on minerals (Rescan 2009). Thus, forestry remains an important component of Terrace's economy, although not as much as in Smithers and the Hazeltons. Construction accounted for 5% of incomes in Terrace, tourism accounted for 4%, while 26% of local incomes in 2006 were derived from the public sector (Horne 2009).

## 11. Education, Training, and Skills

# 11. Education, Training, and Skills

---

This section provides baseline information for education, training, and skills development which is widely acknowledged as one of the principal barriers to the meaningful realization of the socio-economic benefits from regional resource development. Socio-economic benefits in the form of jobs and business opportunities are often expected to flow from project related investment; however, insufficient education and/or lack of specific skills training often limits the employment prospects for residents of many communities in the RSA, especially in Aboriginal communities (Brucejack Project Research Program 2012c).

## 11.1 EDUCATION ATTAINMENT

In Canada, approximately 40% of First Nations adults reported having less than a high school education, and only 5% of First Nations adults have obtained a university undergraduate, graduate, or professional degree, compared to almost 23% of the general Canadian population. Notably, approximately 50% more Aboriginal women than Aboriginal men have obtained some form of post-secondary education (The First Nations Information Governance Centre 2012).

Over the past four years, the percentage of Aboriginal youth enrolled in post-secondary programs in BC has increased by 25%. The number of post-secondary credentials awarded to Aboriginal students increased from 2,100 in 2005/2006 to 2,634 in 2009/2010 (Government of BC 2012). At the British Columbia Institute of Technology, program completion rates among students who identify as Aboriginal have increased by 22% since 2006 (The Vancouver Sun 2012).

### 11.1.1 Regional Study Area Overview

Educational attainment levels across the RSA are close to, but on the whole lagging slightly behind, provincial averages. A notable statistic from Table 11.1-1 is the difference in educational attainment between residents of Aboriginal reserve communities and settler communities. The portion of the population without a high school certificate, diploma, or degree is almost double in aboriginal communities in the RSA than in the five settler communities, where on average just under 28% of the workforce population is without high school certification or above (Statistics Canada 2007b).

### 11.1.2 Dease Lake and Tahltan Nation Communities

According to the 2006 census, 16.9% of Dease Lake residents (aged 15 years and over) had less than a Grade 12 education, which is slightly lower than the provincial average of 20%. Levels of higher academic achievement in Dease Lake were high: the percentage of individuals with trades certificates (about 20%) was approximately double the provincial figure (11%); the rate of individuals with college or other non-university degrees (24%) was notably higher than the provincial figure (about 17%); and those with university certificates, diplomas, or degrees (17%) were slightly lower as compared to the provincial figure (about 19%). Collectively, trades, college, or university education was attained by approximately 61% of individuals in Dease Lake (Statistics Canada 2007a).

High school non-completion rates were higher in each of the Tahltan communities compared to the provincial and Dease Lake averages (Table 11.1-1). Rates of high school non-completion in 2006 in Dease Lake IR 9 (about 67%) and Iskut (61%) were more than three times higher than the provincial rate of 20% (Statistics Canada 2007). According to the 2007 Tahltan Census, 4% of Tahltan members have graduated from college or university, while 5% have completed trades or apprenticeship training (Rescan 2013d).

Table 11.1-1. Educational Attainment by Community 2006

Community	Total Population 15 Years and over	No Certificate, Diploma, or Degree	High School Certificate or Equivalent	Apprenticeship, Trades Certificate, or Diploma	College, CEGEP, or Other Non-university Certificate or Diploma	University Certificate or Diploma Below the Bachelor Level	University Certificate, Diploma, or Degree
Dease Lake <sup>1</sup> (UNI)	295	50 (17%)	60 (20%)	60 (20%)	70 (24%)	0	50 (17%)
Dease Lake IR 9	45	30 (67%)	10 (22%)	0.00%	10 (22%)	0	0
Iskut IR 6	245	130 (53%)	55 (24%)	15 (6%)	30 (12%)	0.00%	10 (4%)
Guhthe Tah IR 12 (Telegraph Creek)	135	75 (56%)	25 (19%)	0	20 (15%)	0	10 (7%)
Gingolx	245	100 (41%)	65 (27%)	35 (14%)	30 (12%)	10 (4%)	10 (4%)
Gitwinksihlkw	160	50 (31%)	45 (28%)	25 (16%)	15 (9%)	10 (6%)	20 (13%)
Laxgalts'ap <sup>2</sup>	X	X	X	X	X	X	X
Gitlaxt'aamiks	610	215 (35%)	160 (26%)	70 (12%)	80 (13%)	30 (5%)	50 (8%)
Hazelton	275	90 (33%)	65(24%)	15 (6%)	55 (20%)	10 (4%)	45 (16%)
New Hazelton	475	160 (34%)	100 (21%)	50 (11%)	55 (12%)	30 (6%)	80 (17%)
Gitanyow	275	150 (55%)	55 (20%)	40 (15%)	25 (9%)	19 (4%)	0
Gitanmaax	540	260 (48%)	100 (18%)	75 (14%)	85 (16%)	15 (3%)	15 (3%)
Gitsegukla	490	370 (76%)	60 (12%)	35 (7%)	20 (4%)	0.00%	0
Gitwangak	340	170 (50%)	65 (19%)	40 (12%)	45 (13%)	10 3%)	15 (4%)
Glen Vowell	160	60 (38%)	30 (19%)	40 (25%)	25(16%)	0	0
Kispiox	440	245 (56%)	95 (22%)	30 (7%)	50 (11%)	15 (3%)	10 (2%)
Stewart	385	90 (23%)	125 (32%)	45 (12%)	35 (9%)	45 (12%)	40 (10%)
Smithers	3,975	975 (25%)	1,375 (35%)	365 (9%)	555 (14%)	180 (5%)	515 (13%)
Terrace	8,735	2,190 (25%)	2,535 (29%)	915 (11%)	1,580 (18%)	455 (5%)	1,060 (12%)
RD Kitimat Stikine	29,740	9,365 (32%)	8,075 (27%)	3,945 (13%)	4,725 (16%)	1,095 (4%)	2,535 (9%)
British Columbia	3,394,910	675,345 (20%)	946,645 (28%)	368,355 (11%)	565,900 (17%)	184,395 (5%)	654,265 (19%)

Source: Statistics Canada (2007b)

Notes:

<sup>1</sup> Statistics Canada employs the "random rounding" method to ensure confidentiality in which values, including totals, are randomly rounded either up or down to a multiple of "5" or "10." As a result, when these data are summed or grouped, the total value may not match the individual values since total and sub-totals are independently rounded. Similarly, percentages, which are calculated on rounded data, may not necessarily add up to 100%.

<sup>2</sup> X = data suppressed to protect confidentiality.

Education levels in the Telegraph Creek community are also notably below the provincial average, as more than half (56%; n = 75) of adults have not completed high school. However, college programs have been completed by approximately 15% of residents, which is comparable to the provincial average of 17% (SNDS 2007). More than half (53%) of Iskut residents over 15 years of age have not achieved a high school graduation certificate, more than double the provincial average of 20% (Statistics Canada 2007a).

Comparison of the 2006 and 2003 Labour Market Census (SNDS 2005, 2007) seems to indicate a broad shift to higher skill levels. The number of people classified as labourers has declined significantly, while those in vocational, technical, and professional categories have seen notable increases. This pattern may reflect continued work experience and training among residents since SNDS skill level categories consider both institutional and on-the-job training.

Table 11.1-1 shows the percentage of individuals with college and other non-university diplomas was higher in Dease Lake (24%) as compared to the provincial rate of 17%, while Iskut and Guhthe Tah were below the provincial rate. The proportion of individuals with university certificates, diplomas, or degrees was notably lower in the Tahltan communities as compared to the provincial average, which may be partly due to the limited access to post-secondary facilities and programs in these communities.

### 11.1.3 Stewart

There is a lower rate of high school completion in Stewart relative to the rest of the province. Nearly a quarter of residents (23%) had not completed high school in 2006 (Statistics Canada 2007a). Trades certificates were held by 11% of the population (n = 45), down from about 17% (n = 80) in 2001. This is comparable with the provincial average of 11%. However, only 31% of residents (120 people) held university or college education (of varying degrees), compared with 41% provincially 2006 (Statistics Canada 2007a).

### 11.1.4 Nisga'a Nation

The percentage of individuals in Nisga'a villages with no certificates, diplomas, or degrees in 2006 was higher than the provincial average (20%), ranging from about 31% in Gitwinksihlkw, to 35% in Gitlaxt'aamiks, and 41% in Gingolx. The higher non-completion rate in Gingolx may be related to the community not having a high school and not being accessible by road until 2003 (Nathan Barton School n.d.). However, the proportion of individuals with an apprenticeship trades certificate or diploma was slightly higher in Gitlaxt'aamiks (about 12%), and was notably higher in Gitwinksihlkw (about 16%) and Gingolx (14%) as compared to the provincial average (11%). Similarly, the percentage of individuals with a university certificate, diploma, or degree was approaching the provincial rate (about 19%) in Gitwinksihlkw (16%), but was somewhat less in Gitlaxt'aamiks (8%) and Gingolx (4%). Statistics Canada has suppressed the 2006 census data for the Nisga'a village of Laxgalts'ap (Statistics Canada 2007b).

A survey of approximately 400 Nisga'a citizens living on Nisga'a Lands as well as in Terrace, Prince Rupert, and Vancouver indicates that in general, educational attainment among members of Nisga'a Nation is improving across all categories as compared to the last census (Rescan 2012b).

### 11.1.5 The Hazelton and Skii km Lax Ha, Gitxsan Nation, and Gitanyow First Nation

Levels of academic achievement in the Hazelton communities are lower than the provincial average, which is particularly evident when comparing high school incompleteness rates. In 2006, approximately one fifth (20%) of BC residents aged 15 years and over had not completed high school, whereas incompleteness rates in New Hazelton and Hazelton were estimated at 34 and 32%, respectively (Statistics Canada 2007b).

Statistical data specific to the Skii km Lax Ha is unavailable, however, in interviews it was noted that Skii km Lax Ha children and youth are doing well in school. Currently Skii km Lax Ha students attend school in Hazelton, although some are away in Prince George. Most expect to go on to some form of post-secondary education (Brucejack Project Research Program 2013).

Residents from the Hazelton communities aged 15 years and over held fewer apprenticeships and trade certificates than is typical in BC. Holders of college certificates (up to but not including university level) were relatively few in number in most of the Hazelton communities, yet comparatively more than the population of BC. College certificates were obtained by 20% of the population versus 17% of the provincial population (Statistics Canada 2007b).

Both communities demonstrated lower levels of university achievement than is average among the provincial population (24.7%). The proportion of people 15 years and over in both Hazelton and New Hazelton with university achievements was respectively estimated at 23.2% and 19.6%, which was only slightly below levels for BC (Statistics Canada 2007b).

Statistically the levels of educational attainment in the Gitxsan communities are not dissimilar from other Aboriginal communities in the region. Only about one fifth (about a quarter for the Nisga'a communities) of the on reserve population of the Gitxsan communities (for which data is available) has attained high school certification. The exception is Gitsegukla at only 12% (Table 11.1-1). Key informant interviews suggest that low levels of attainment are, unsurprisingly, linked to economic hardship which has tended to exacerbate pre-existing social issues. On the one hand, parents are not doing as well as in the past in getting their children to go to and stay in school. On the other hand, schools are run down and ill equipped which makes them less attractive to both students and teachers alike (Brucejack Project Research Program 2012c).

In 2006, 20% of the Gitanyow population aged 15 years and over had completed a high school certificate. High school completion rates were similar for males and females. The Gitanyow high school incompleteness rate (54%) was more than twice the provincial rate (20%). A higher proportion of the Gitanyow population obtained trades certificates (14%) than the province overall (11%). In 2006, 9% of the population had a college diploma and 4% had a university certificate or diploma below the bachelor level. None of the population had obtained a university degree. College and university education was much less prevalent than in the province (Statistics Canada 2007a).

Marsden (2010) records a number of barriers to education identified by the Gitanyow. Lack of funding topped the list, followed by lack of child care, and distance to post-secondary educational institutions. Many Gitanyow respondents admitted they did not know where to look for funding for education beyond that provided by the band.

#### **11.1.6 Smithers**

The 2006 census reports that nearly a quarter (24.5%) of Smithers' population (aged 15 years and over) had less than a Grade 12 education; slightly higher than the provincial rate of 20% (Statistics Canada 2007a). Trades, college, or university education was attained by approximately 40% of the population, as compared to 52% for the province as a whole.

#### **11.1.7 Terrace**

One-quarter of the population of Terrace (15 years of age and over) had not completed high school in 2006, compared to 20% in the province (Table 11.1-1). The amount of people with apprenticeship trades certificate or diplomas (10.5%) was about equal to the provincial average. The rate of those with a university degree or diploma (12.1%), however, was notably below the provincial average (19.3%; Statistics Canada 2007a).

### **11.2 PRIMARY AND SECONDARY EDUCATION FACILITIES AND SERVICES**

#### **11.2.1 Regional Study Area**

Students in the RSA communities are provided with the opportunity to obtain their high school certificate (or equivalent) within their home or neighbouring community. Post-secondary institutions are mainly represented by the various campuses of Northwest Community College (NWCC). The closest university is the University of Northern British Columbia in Prince George. In addition, several independent and/or First Nations run training or post-secondary institutions offering high school completion and other speciality programmes (see Section 11.3).



The RSA has a number of post-secondary institutions, notably NWCC whose main campus is in Terrace with a number of satellite campuses or facilities in Gitwinksihlkw, the Village of Hazelton, Smithers, and Stewart (main campus; NDIT 2010c). The northwest campus of the University of Northern British Columbia is also located in Terrace.

### 11.2.2 Local Study Area Communities

Table 11.2-1 summarizes the schools in terms of selected enrolment characteristics across all LSA communities except for the recently restructured Nisga'a school system which is captured in section 11.2.5.<sup>28</sup>

### 11.2.3 Dease Lake and Tahltan Nation Communities

Stikine School District 87 serves Dease Lake and the Tahltan Nation communities. Dease Lake School provides K-12 curricula and has an enrollment of just over a hundred students, approximately 85% of whom are Aboriginal. In 2011/2012, the percentage of students with special needs was approximately 7% and the percentage of students who were English-language Learners (ELL) was approximately 28%. Graduation data for the Dease Lake School is unavailable (BC MOE 2012).

The Tahltan Elementary-Secondary School at Telegraph Creek provides Kindergarten to Grade 12 education. The school is part of Stikine School District 87 and had a total enrolment of 37 students on September 30, 2011 (kto12.ca 2012). The school is run by the Tahltan Indian Band with funding from AANDC. The school employs four teachers and five support staff. Teaching staff have been cut in recent years as more students have left the community to pursue education in other centres.

The Klappan Independent Day School is a Kindergarten to Grade 9 school, administered by the Education Department of the Iskut First Nation. As an independent school, it is not part of the provincial school district system. Enrolment in the school has remained fairly steady over the past three years with 39 students enrolled as of September 30, 2011. After Grade 9, students are bussed to Dease Lake, which is an hour's drive.

In 2011/2012, the percentage of students with special needs in the Tahltan School was approximately 12%, and the percentage of students who were ELL was 44.1%. Graduation rates for the Tahltan School were unavailable (BC MOE 2012).

Many high school students from Iskut and Telegraph Creek choose to attend school in Dease Lake; it is also not uncommon for students to leave the community to pursue high school in larger centres, including Whitehorse, Smithers, Terrace, and Prince George, where a wider array of programs and extra-curricular activities are available (Rescan 2009).

### 11.2.4 Stewart

Education in Stewart falls under the Coast Mountains School District 82 based in Terrace. The Bear Valley School is located in Stewart and provides Kindergarten to Grade 12 programs. Total student enrolment was 70 for the 2011/2012 school year. Approximately 40% of students are Aboriginal, approximately 7% have special needs, and although data for ELL students was not available for the 2011/2012 school year, there were three ELL students (4.1%) for the 2010/2011 school year (BC MOE 2012).

---

<sup>28</sup> A cautionary note on statistics reported by school district: these numbers will in some cases reflect district-wide statistics which may include communities and schools that are not officially part of the RSA.

**Table 11.2-1. Schools and Student Population Characteristics<sup>1</sup>**

School Name	Grade Level	Enrolment		Aboriginal		Special Needs <sup>2</sup>		English Language Learner	
		2011/2012	2010/2011	2011/2012	2010/2011	2011/2012	2010/2011	2011/2012	2010/2011
<i>Dease Lake and Tahltan Nation Communities</i>									
Dease Lake School	K-12	106	106	91 (85.8%)	89 (84.0%)	7 (6.6%)	5 (4.7%)	30 (28.3%)	27 (25.5%)
Tahltan School	K-9	34	44	34 (100.0%)	44 (100.0%)	2 (5.9%)	2 (4.5%)	15 (44.1%)	10 (22.7%)
<i>Town of Stewart</i>									
Bear Valley School	K-12	79	74	31 (39.2%)	31 (41.9%)	6 (7.6%)	5 (-6.8%)	-	3 (4.1%)
<i>The Hazeltons and Skii km Lax Ha, Gitxsan, and Gitanyow First Nations Communities</i>									
Kitwanga Elementary School	K-7	85	81	83 (97.6%)	81 (100.0%)	7 (8.2%)	4 (4.9%)	33 (38.8%)	35 (43.2%)
John Field Elementary School	K-7	151	149	122 (80.8%)	121 (81.2%)	10 (6.6%)	7 (4.7%)	57 (37.7%)	54 (36.2%)
Hazelton Secondary School	8-12	356	377	295 (82.9)	319 (84.6%)	33 (9.3%)	38 (10.1%)	33 (9.3%)	88 (23.3%)
New Hazelton Elementary	K-7	176	207	151 (85.8%)	174 (84.1)	4 (2.3%)	11 (5.3%)	17 (9.7%)	21 (10.1%)
Gitsegukla Elementary (independent <sup>3</sup> )	K-7	70	No data	No data	No data	No data	No data	No data	No data
Kispiox Elem./Jr. Secondary <sup>3</sup>	K-7	97	No data	No data	No data	No data	No data	No data	No data
<i>Town of Smithers</i>									
Lake Kathlyn Elementary School	K-7	66	78	39 (59.1%)	47 (60.3%)	10 (15.2%)	10 (12.8%)	-	6 (7.7%)
Muhiem Memorial Elementary	K-7	255	248	61 (23.9%)	63 (25.4%)	5 (2.0%)	8 (3.2%)	8 (3.1%)	9 (3.6%)
Walnut Park Elementary School	K-7	354	338	73 (20.6%)	69 (20.4%)	11 (3.1%)	12 (3.6%)	-	-
Smithers Secondary School	8-12	823	836	214 (26.0%)	206 (24.6%)	41 (5.0%)	40 (4.8%)	-	1 (0.1%)
<i>City of Terrace</i>									
Bulkley Valley Learning Centre	N/A	52	82	30 (57.7%)	50 (61.0%)	6 (11.5%)	13 (15.9%)	-	-
Cassie Hall Elementary School	K-6	260	276	183 (70%)	186 (67.4%)	22 (8.5%)	28 (10.1%)	66 (25.4%)	64 (23.2%)
Ecole Mountainview School	K-6	159	144	26 (16.4%)	33 (22.9%)	-	1 (0.7%)	-	-
Suwilaaks Community School	K-6	268	269	209 (78.0%)	185 (68.8%)	19 (7.1%)	20 (7.4%)	65 (24.3%)	65 (24.2%)
Thornhill Elementary School	K-6	208	204	76 (36.5%)	81 (39.7%)	25 (12.0%)	29 (14.2%)	16 (7.7%)	9 (4.4%)
Uplands Elementary School	K-6	356	351	45 (12.6%)	50 (14.2%)	32 (9.0%)	31 (8.8%)	11 (3.1%)	8 (2.3%)
Thornhill Primary School	K-3	213	208	78 (33.6%)	77 (37.0%)	1 (0.5%)	-	32 (15.0%)	30 (14.4%)
Skeena Junior Secondary	7-9	518	485	183 (35.3%)	163 (33.6%)	68 (13.1%)	64 (13.2)	1 (0.2%)	-
Caledonia Sr. Secondary School	10-12	515	518	173 (33.6%)	178 (34.4%)	71 (13.8%)	79 (15.3%)	-	1 (0.2%)

Source: BC MOE (2012).

<sup>1</sup> Data for public schools and reserve schools only

<sup>2</sup> Includes sensory disabilities, learning disabilities, and behaviour disabilities.

<sup>3</sup> Independent band run schools, additional student data not currently available.

Like all schools in the Coast Mountains School District 82, Stewart's education system has suffered from the impacts of a decreasing population. In 2009, the school (along with all other schools in the district) returned to a five-day week after a period of several years with a four-day school week (due to low enrolment rates).

#### 11.2.5 Nisga'a Nation

Nisga'a village schools fall within School District 92 (Nisga'a), the office of which is located in Gitlaxt'aamiks. School District 92 administers Nisga'a Elementary Secondary School (Kindergarten to Grade 12) in Gitlaxt'aamiks; Gitwinksihlkw Elementary School (Kindergarten to Grade 7); Alvin A. McKay Elementary School (Kindergarten to Grade 7) in Laxgalts'ap; and Nathan Barton Elementary School (Kindergarten to Grade 7) and the Gingolx Adult Learning Centre (adult education) in Gingolx. The village schools strongly reflect Nisga'a culture, as almost all students and staff are Nisga'a or First Nations, and Nisga'a language is taught in the schools with an established curriculum (School District 92 n.d.). School District 92 employed 32 teachers and had 392 students on their nominal roll for the 2011/2012 school year.

The six-year completion graduation rate for secondary school students was 20.6% (BC MOE 2012).

Nisga'a village schools have experienced a decline in enrolment in recent years. In response to declining enrolment, but also due to concerns about student achievement, multi-grade classes, and other issues, School District 92 launched an initiative to restructure and improve the Nisga'a education system. In September 2012, School District 92 and the Nisga'a villages launched a pilot project to improve education outcomes (e.g., literacy, numeracy, and graduation rates) and increase the focus on trades and Nisga'a culture (School District 92 n.d.). Table 11.2-2 shows the grade levels and enrolment prior to and after the restructuring and the realignment of schools and programmes.

**Table 11.2-2. Nisga'a Schools by Villages**

Nisga'a Village	School Name	Student Enrolment (Sept. 2011)	Grade Levels	Restructuring Introduced Sept. 2012
Gitlaxt'aamiks	Nisga'a Elementary Secondary School	250	K - 12	Two tiers: K - 6 and 10 - 12
Gitwinksihlkw	Gitwinksihlkw Elementary School	50	K - 7	7 - 9
Gingolx	Nathan Barton Elementary School	49	K - 7	4 - 6
Laxgalts'ap	Alvin A. McKay Elementary School	56	K - 7	K - 3

Source: School District 92 (n.d.).

Wilp Wixo'xskwhl Nisga'a (Nisga'a House of Wisdom) Institute (WWNI), in partnership with public institutions, offers post-secondary programs with a Nisga'a focus. In partnership with the University of Northern British Columbia, WWNI offers a Bachelor of Arts degree in (Nisga'a) First Nations studies, a university preparation course (Northern Advancement Program), and a Master's Degree in Nisga'a language and culture. NLG provides funding for Nisga'a students to pursue post-secondary education in BC or elsewhere in North America (NLG n.d.-b).

#### 11.2.6 The Hazeltons and Skii km Lax Ha, Gitxsan Nation, and Gitanyow First Nation

All schools in Hazelton and New Hazelton are administered by Coast Mountains School District 82 located in Terrace. Elementary school-aged students in Hazelton attend the John Field School (Kindergarten to Grade 7), which had 151 students for the 2011/2012 school year. Approximately 80% of students who attend the school are Aboriginal, approximately 5% of students have special needs, and approximately

37% of students are ELL. The Hazelton Secondary School (grades 8 to 12) had 356 students for the 2011/2012 school year. Approximately 84% of students are Aboriginal, approximately 10% of students have special needs, and the percentage of ELL students has varied between about 10 and 20%. Only 30% of all eligible Grade 12 students graduated in the 2010/11 school year (BC MOE 2012).

Elementary students residing in New Hazelton attend the New Hazelton Elementary School (Kindergarten to Grade 7), which had a total enrolment of 176 students in 2011/2012. Approximately 85% of students are Aboriginal, the percentage of students with special needs has ranged over the past two years from 2.3% for the 2011/2012 school year and 5.3% for the 2010/2011 school year, and the percentage of ELL students is approximately 10% (BC MOE 2012).

The Gitanyow Independent School is located in the Village of Gitanyow and offers schooling from Pre-school through to Grade 7. In addition to following the BC curriculum, the school incorporates local cultural and linguistic education. Hazelton is the nearest town offering grades 8 to 12, and most Gitanyow of secondary school age attend Hazelton Secondary, which is administered by Coast Mountains School District 82.

Hazelton Secondary is federally funded and has the capacity to meet basic needs. However, additional funding is needed for maintenance and upgrades. Despite the contribution of First Nation education funds and grants awarded to the band office for extra activities, the range of programmes available remains very limited (A. Derrick, pers. comm.).

Gitxsan members attend either independent schools (usually only K-7) within their reserve communities such as Kispiox Elementary or public schools in Coast Mountains School District 82, which include Kitwanga Elementary School, New Hazelton Elementary School, John Field Elementary School, and Hazelton Secondary school. There is also a Kindergarten to Grade 7 elementary school in Gitsegukla.

### 11.2.7 Smithers

Smithers has three public elementary schools (Lake Kathlyn, Walnut Park, and Muheim Memorial, a French immersion school) that provide Kindergarten to Grade 7 programming, while the Smithers Secondary School provides a grades 8 to 12 curriculum. Four private schools operate in the community.

Lake Kathlyn Elementary had a total enrolment of 66 students in 2011/2012. Approximately 59% of students are Aboriginal, the percentage of students with special needs was nearly 20%, and there were no ELL students (BC MOE 2012). Walnut Park Elementary had a total enrolment of 354 students in 2011/2012. Approximately 21% of students are Aboriginal, 6.8% of students had special needs, and there were no ELL students. Muheim Memorial had a total enrolment of 255 students in 2011/2012. Nearly 24% of the students were Aboriginal, 3.1% of the students were ELL, 64.3% were French Immersion, and 6.8% had special needs.

During the 2011/2012 school year, there were 823 students enrolled in Smithers Secondary School. More than a quarter of the students (26%) were Aboriginal, 9.2% had special needs, and there were no ELL students. Notably, 95% of all eligible Grade 12 students graduated in 2010/2011 (BC MOE 2012).

The Bulkley Valley Learning Centre provides an alternative setting for students that struggle in a classroom setting. Aboriginal students are highly represented at the Bulkley Valley Learning Centre. In recent years, the staff at the Bulkley Valley Learning Centre employed a variety of strategies and structures at the school to increase course completion. In the 2007/08 school year, the Bulkley Valley Learning Centre had 12 graduates, followed by 11 in 2008/09, and 25 in 2009/10 (School District 54 2010).

### 11.2.8 Terrace

Terrace has five elementary schools, one Kindergarten to Grade 3 school, one middle school, and two secondary school. Cassie Hall Elementary School provides Kindergarten to Grade 6 programming and had 260 students in the 2011/2012 school year; 70% (183) of students were Aboriginal. The Ecole Mountainview provides Kindergarten to Grade 6 programming and had 159 students in the 2011/2012 school year; 26 (16.4%) students were Aboriginal. The Suwilaawks Community School provides Kindergarten to Grade 6 programming and had 268 students for the 2011/2012 school year; three-quarters of the student body (78.0% or 209 students) were Aboriginal. Thornhill Elementary School provides Kindergarten to Grade 6 programming and had 108 students in the 2011/2012 school year; over one-third (36.5% or 76 students) were Aboriginal. The Uplands Elementary School provides Kindergarten to Grade 6 programming and had 356 students in the 2011/2012 school year; 12.6% (45 students) were Aboriginal. The Thornhill Primary School provides Kindergarten to Grade 3 programming and had 213 students in the 2011/2012 school year; over one-third of the study body (33.6% or 78 students) were Aboriginal (BC MOE 2012).

The Caledonia Secondary School provides a grades 10 to 12 curriculum and had 515 students in the 2011/2012 school year. About one-third of students (33.6% or 173 students) at the Caledonia Secondary School are Aboriginal. Parkside Secondary is an alternative school that had 155 students in the 2011/2012 school year. Two-thirds (66.5%) of students attending Parkside Secondary are Aboriginal (BC MOE 2012).

Graduation rates at the Caledonia Secondary School have fluctuated over the past five years. Overall, the graduation rate for all students has decreased by 3.3% between 2006 and 2010. The graduation rate for Aboriginal students decreased by 18.3% over the same time period. The number of students enrolled in Grade 12 has decreased by approximately one-fifth over the specified time period (BC MOE 2012).

## 11.3 POST-SECONDARY PROGRAMMES AND SKILLS TRAINING

### 11.3.1 Regional Study Area

There is a wide range of adult education, post-secondary programmes, and skills training opportunities throughout much of the RSA, although distribution and access is uneven. The most abundant resources are concentrated in the regional population hubs in Smithers and Terrace. While efforts continue to bring education and skills training opportunities to a wider segment of the population, the challenges of geography and limited budgets persist.

The North Coast Distance Education School, a partnership of Coast Mountain School District #82, the BC Learning Network, and Learn Now BC, offers students throughout northwest BC options to pursue independent study programs, and also offers distance adult education classes (North Coast Distance Education School 2013).

### 11.3.2 Dease Lake and Tahltan Nation Communities

Two regional colleges, NWCC and Northern Lights College, offer services in Dease Lake. Post-secondary education is not readily available in Telegraph Creek or Iskut. Tuition costs are often a barrier for individuals from participating in short-term courses, including safety certifications (Simpson and Simpson 2006). AANDC funding is provided to pursue post-secondary education; however, programs must last at least a year. With additional resources, the Tahltan would like to offer adult education, literacy, and trades programs or apprenticeships, as well as additional funding for students to pursue post-secondary education (Simpson and Simpson 2006).

In May of 2010, Northern Lights College removed its programming services from Dease Lake and Atlin due to provincial budget cuts. It reopened in Dease Lake in January 2012. Northern Lights College offered the Environmental Monitoring Coordinator Program from January 2012 to June 2012 and fall programmes Health Care Assistants and Mining Fundamentals and Heavy Equipment Operators.

NWCC has previously offered a course in mining trades in Dease Lake. The course was well-received, although there are no immediate plans to revitalize the program. NWCC, in collaboration with the Stikine School District, has also offered programs specific to regional opportunities, including welding, food safety, and teacher assistant certifications (Bridges and Robinson 2005).

### 11.3.3 Stewart

Post-secondary programming is not available in Stewart. NWCC provides select programs at campuses in the Nass Valley and in Terrace (NWCC 2012). The community hopes to eventually develop a trade school (A. Danuser and S. McFee, pers. comm.)

### 11.3.4 Nisga'a Nation

In partnership with NWCC, WWNI offers vocational and technical training, Grade 12 achievement, post-secondary preparatory courses, trades education, and continuing education (NLG n.d.-b).

Additional training opportunities available to Nisga'a residents are limited. These include opportunities through the Nisga'a Women - Introduction to Mineral Resource Industry (NNKN 2012), which offers three days of job shadowing during the months of July, August, September, and October and can lead to immediate employment for those interested. Furthermore, job shadowing is being offered by Castle Resources, a Toronto-based junior mining company focused on the redevelopment of the past-producing Granduc Copper Mine north of Stewart. Job shadowing includes field administration; introduction to industry contractors; overview of portal camp; mining safety; and first aid, food, and camp services (NNKN 2012).

Nearby options for adult education and training include the NWCC main campus in Terrace and the Gitksan Wet'suwet'en Education Society (GWES) in Hazelton.

### 11.3.5 The Hazeltons and Skii km Lax Ha, Gitxsan Nation, and Gitanyow First Nation

NWCC has a campus in Hazelton that serves the surrounding area. NWCC is affiliated with the mineral exploration school in Smithers. Adult education upgrading programs are the most frequently accessed in Hazelton. Other popular programs are specific employment training courses with a focus on the mining industry and heavy equipment operation, safety, and the trades (Brucejack Project Research Program 2012c). The college does not offer grants to students and needs more staff for counselling and to do outreach with the local high schools (Brucejack Project Research Program 2012c).

The GWES, located in Hazelton, offers training, educational, and cultural programs for people in the Gitksan-Wet'suwet'en region. Members of the Gitanyow community have access to programs administered by GWES.

Funding for the GWES is entirely proposal-based, as GWES does not receive any core funding. GWES provides the First Nations High School (grades eight to twelve), a variety of postsecondary programs and licenced daycare with 25 spaces. GWES is affiliated with Norquest College in Edmonton, Alberta; the Nicola Valley Institute of Technology in Merrit and Burnaby, BC; the University of Northern British Columbia, which has its main campus in Prince George; and the University of Victoria. GWES has a dorm with ten beds for students from other communities enrolled in a program at GWES (Brucejack Project Research Program 2012c).

In partnership with Norquest, GWES provides a Licenced Practical Nursing program, which is no longer offered anywhere else in BC. Through their partnership with the Nicola Valley Institute of Technology, GWES offers a trades and technology program, an adult diploma program, and a home and community care program. The trades and technology program provides a wide variety of experiences that bridges students into particular trades, including electrical, plumbing, and pipe fitting. GWES provides certified instructors for arts, woodworking, and mentoring and the Nicola Valley Institute of Technology sends a mobile unit once per year with instructors for the electrical and pipe fitting courses. Instructors at GWES are often graduates of GWES. The partnership with the University of Victoria will commence in 2013 with the offering of a program related to child, youth, and family development. The program bridges students into further education in social work (Brucejack Project Research Program 2012c).

Programs at GWES are open to both Aboriginal and non-Aboriginal students, many of whom are adult learners. There were 138 students on the nominal role for the 2011/2012 school year, including 13 in the Licenced Practical Nursing program and 20 in the homecare program. GWES also provides a pre-employment program called Bladerunners that had two classes of 16 students for the 2011/2012 school year (Brucejack Project Research Program 2012c).

#### **11.3.6 Smithers**

NWCC is based in Terrace and operates campuses in communities across the northwest, including Smithers. In 2010, a new NWCC facility was developed at Smithers, which included a gathering area, expanded learning facilities, and improved video conferencing and distance education capabilities (NWCC 2010b).

NWCC partners with School District 54 for training and postsecondary initiatives through which high school students can obtain dual high school/college credits. In recent years, related initiatives have been more focused on providing access to trades training in preparation for available and upcoming employment in the regional economy.

Training programs in Smithers are offered through the NWCC School of Exploration and Mining (SEM), which was developed in response to the training needs of the mining industry. The SEM was established in 2004 and provides training for the minerals industry workforce in northern BC communities. It is a result of a partnership between the NWCC, the Smithers Exploration Group, and the Province of BC, and equips students with job-ready skills (NWCC 2010b). The school has graduated 850 students to date, and 83% of graduates have either found jobs or gone on to pursue additional schooling (NWCC 2012).

SEM courses include Drill Core Technician Basic Training, Surface Diamond Driller's Helper, Prospector Basic Training, Mining Exploration Field Assistant, and Introduction to Metal Leaching and Acid Rock Drainage. Internship programs are also available through the SEM, including exploration skills training, environmental monitoring courses, and camp operations building courses. Students also participate in a variety of safety training courses (NWCC 2010b).

#### **11.3.7 Terrace**

The NWCC was first established in Terrace and now operates campuses in communities across the northwest (NWCC 2010a). UNBC also has its northwest satellite campus in Terrace.

The NWCC has a strong vocational, trades, and technical focus. Regular NWCC programming includes special education assistant training, workplace skills training, career and college preparation, continuing education, university credit, practical nursing, and a Bachelor of Science in Nursing

(NWCC 2012). Many other part-time courses are available and are based on local needs. The campus provides both on-line and in-class courses.

UNBC's northwest campus in Terrace offers university transfer courses at both the first and second year levels in Natural Resources, Business Administration, Applied Computer Technology, and Integrated Human Services. The campus also offers part-time graduate programs and undergraduate courses towards a general Bachelor of Arts and a minor in resource recreation and tourism (UNBC 2010).

Training services available in Terrace include St. John Ambulance, which provides First Aid Services; Northwest Training Ltd., which provides Management Training and Development; On-site Computer Training & Development, which provides basic computer training; and the Cat Rental Store, which provides equipment and operator training (City of Terrace 2010a).



## 12. Community Health and Well-being

## 12. Community Health and Well-being

---

### 12.1 COMMUNITY WELL-BEING INDEX

Conceptually, 'well-being' is a term meant to characterize a holistic definition of health that includes many facets of individual, family and community conditions; however, the term itself is neither consistently defined nor measured in social research. Several approaches for measuring well-being exist in Canada each of which employ a slightly different mixture of indicators. For instance, Human Resources and Skills Development Canada (2012) evaluates the social well-being of Canadians (both Aboriginal and non-Aboriginal) by looking at factors such as, work, housing, family life, social participation, leisure, health, security, environment, financial security, and learning. Other approaches examine Aboriginal community well-being by focusing on poverty, educational attainment, and health and social issues (White, Beavon, and Spence 2008).

This report employs the Community Well-being (CWB) Index developed by AANDC. AANDC's CWB index provides a means of analyzing the socio-economic differences in well-being between Aboriginal and non-Aboriginal Canadians as well as across First Nations or Inuit communities. It is also a means to help measure and track changes over time in the quality of life of Aboriginal communities relative to other Canadian communities. Data from the Census of Canada is utilized to inform the CWB index score, which is a single number that ranges from a low of 0 to a high of 100. CWB is composed of indicators based on income, education, housing conditions, and labour force activity (AANDC 2010a).

While AANDC's index provides a convenient way of comparing complex socio-economic and socio-cultural conditions its reliance on economic indicators potentially limits its usefulness in the context of Aboriginal communities. For example, although labour force participation rates speak to the reality of employment and unemployment in a community, other factors that characterize Aboriginal communities are not considered, such as, the informal economy and sharing, the extent to which food and other natural items from the environment supplement individual and family income, the nature of employment in northern and isolated communities, seasonal work, and work in project camps. While the index is useful for comparative purposes as a relative measure and means for following trends over time, the reader should be cautious about interpreting the meaning of the CWB as it applies to any one community. In reality, things may be better, or worse, than indicated by the index number.

Overall, comparisons of the CWB index from 1981 to 2006 for First Nations and other Canadian communities suggest that well-being in First Nations communities is consistently below that of other communities across the country. It is often observed that First Nations exhibit lower levels of education, skills training (including trades), and employment (and subsequent work experience) than non-Aboriginals in the same areas (Statistics Canada 2002b, 2007a; White, Beavon, and Spence 2008). This can be attributed, in part, to a lack of opportunities for training and skill-matched jobs, but also to factors such as low self-esteem and potential conflict between wage-based employment and traditional ways of life. The social and personal legacies of the residential school regime are also strongly evident among First Nations; residual effects may manifest in a variety of forms, including relationship dysfunction, substance misuse, depression, and anger.

The areas of greatest disparity between First Nations and other Canadian communities are in housing and income and while the well-being gap narrowed slightly between 1981 and 2001, it subsequently widened slightly between 2001 and 2006 (AANDC 2010b). Nevertheless, well-being appears to vary considerably between First Nations communities which show a greater range than that observed in

other communities. On average, however, Aboriginal communities in BC rank higher than their counterparts in other parts of the country (Table 12.1-1).

**Table 12.1-1. Community Well-being, 2006**

Census Division Name	2006 Income Score	2006 Education Score	2006 Housing Score	2006 Labour Force Activity Score	2006 CWB Score
Dease Lake (UNI)	no data	no data	no data	no data	no data
Dease Lake IR 9	no data	no data	no data	no data	61
Guhthe Tah IR 12	no data	no data	no data	no data	67
Telegraph Creek IR 6 and IR 6A	no data	no data	no data	no data	no data
Iskut	69	35	68	79	63
Tahltan Nation Average					64
Stewart	87	57	98	90	83
Gingolx	49	45	76	63	58
Laxgalts'ap	no data	no data	no data	no data	no data
Gitwinksihlkw	no data	no data	no data	no data	70
Gitlaxt'aamiks	65	51	73	77	67
Nisga'a Nation Average					65
Hazelton	75	53	84	83	74
New Hazelton	77	54	89	81	75
Gitanmaax	59	40	78	67	61
Kispiox	53	33	73	63	56
Gitsegukla	36	20	78	60	49
Gitwangak	54	37	64	65	55
Sik-e-dakh <sup>1</sup>	no data	no data	no data	no data	61
Gitxsan Nation Average					56
Gitanyow	50	33	73	59	54
Smithers	83	58	96	87	81
Terrace	83	58	92	86	80
Aboriginal Communities: Average CWB index for BC					62
Non-Aboriginal Communities: Average CWB index for BC					80
Aboriginal Communities: Average CWB index for Canada (n=537)					57
Non-Aboriginal Communities: Average CWB index for Canada (n=3860)					77

Source: AANDC (2011)

Notes:

<sup>1</sup> Also known as Glen Vowell IR 1

### 12.1.1 Regional Study Area

According to the AANDC, of the bottom 100 communities of the CWB Index, 96 are Aboriginal communities, while only one First Nations community ranked among the top 100 at the high end of the index (AANDC 2011). As shown in Table 12.1-1, across the RSA, the highest CWB score is found in Stewart (83) and the lowest in Gitsegukla (49). Scores in the Tahltan communities fall in the 60s, approximately 20 points below the settler communities in the LSA. Scores in Nisga'a villages range from a relatively low score of 58 in Gingolx to a score of 70 in Gitwinksihlkw. Scores in the Gitxsan communities ranged from 49 in Gitsegukla to 61 in Gitanmaax and Sik-e-dakh (Glen Vowell). Gitanyow

also scored fairly low with 54. CWB scores ranged from 74 and 75 in Hazelton and New Hazelton, respectively, to scores in the low 80s for Smithers, Stewart, and Terrace (AANDC 2011).

Research specific to the resource sector has highlighted women and indigenous peoples, in particular, as potentially marginalized groups who may experience the costs and benefits of resource development differently to the general population (Oxfam 2002; CCSG Associates 2004; World Bank 2004; PDAC 2009; ICMM 2010; IFC 2012). Evidence from northwest BC indicates that women, Treaty Nations, and First Nations may face additional challenges or barriers in terms of employment, income, and social development (TCC 2006). Further, many reserve communities have been negatively affected by health facility closures (A. Webber, pers. comm.).

The identification of potentially affected communities within the RSA which may be more vulnerable to socio-economic changes can assist those communities to benefit from Project opportunities equally. Based on Table 12.1-1, as well as baseline data on Labour Force and Employment (Section 9), Income and Earnings (Section 10.2), Education, Training and Skills (Section 11.1), and Community Infrastructure and Services (Sections 13.1 and 13.2), it is clear that Aboriginal communities (including First Nations and Nisga'a) within the RSA have a different socio-economic situation to non-aboriginal groups. Generally speaking, low levels of education, greater social issues, higher levels of unemployment and greater reliance upon natural resources in the pursuit of traditional ways of life imply that Tahltan, Nisga'a, Gitksan and Skii km Lax Ha communities would struggle more to access the socio-economic opportunities associated with the Project and may be more vulnerable to socio-economic changes within the RSA.

In some ways more telling of underlying social conditions in many of the Aboriginal communities in the RSA is the following excerpt from a key informant interview from Brucejack Project Research Program (2012c). The comment speaks to multiple issues linked to poverty, low education levels, legacy of the residential school system, and the problems associated with simply injecting money to solve deeply rooted and complex social problems:

*The government supports only provide a band-aid. They don't provide solutions or the quality services that are needed. Yes, we have a NADAP worker, but there are confidentiality issues around that (small community) and people are afraid of the stigma associated with getting help - whether it's a real or perceived stigma, this deters people from accessing help. Plus - the person in the NADAP role is often not qualified to deal with the issues that are rooted in these communities. People think more jobs will make things better - but I'm asking, what happens when you provide sick people with lots of money? I don't think it will be good. All the residential school money that people received is just gone. If it's someone who drinks or uses drugs - giving them more money just makes it easier for them to continue. They'll buy vehicles and kill themselves. I would say 85% of the residential school money is just gone. They didn't use the money for healing or counselling - that's what that money was meant for. The social issues are the same.*

## 12.2 INDICATORS OF COMMUNITY HEALTH, WELL-BEING AND SOCIAL PROBLEMS

To help provide a more in depth picture of community health and well-being across the LSA communities this section builds on the data provided in Table 12.1-1 by looking at a variety of indicators of health and well-being in the LSA communities produced by BC Stats. Data is intermittent between different communities and jurisdictions, for example, data is suppressed for Snow Country LHA which includes Stewart, or the LHA for Dease Lake and the Tahltan reserve communities (LHA 94 Telegraph Creek) for confidentiality reasons that arise due to the very low population levels in these

areas. , Where available data for these areas is presented, otherwise this section focuses mainly on BC Stats data compiled and reported for the following LHAs:

- Nisga’a LHA 92, including the Nisga’a villages of Gitlaxt’aamiks, Gitwinksihlkw, Laxgalts’ap, and Gingolx;
- Upper Skeena LHA, including the District of New Hazelton, the Village of Hazelton, and surrounding areas (i.e., including South Hazelton, Gitanyow, and Ski km Lax Ha who reside in the Hazeltons);
- Smithers LHA, including Houston, Telkwa, and surrounding communities; and
- Terrace LHA.

BC Stats compiles socio-economic profiles of these LHAs and presents series of data on a range of social indicators. The discussion below is framed around the broad themes of community health, children at risk, youth at risk, human economic hardship, and crime.

Additional community-level, regional, or sub-regional information on health, well-being and similar issues is uncommon at the community level but is reported where available.

### 12.2.1 Community Health

Life expectancy at birth and potential years of life lost (PYLL) from natural and accidental causes, suicides, and homicide are used as indicators of community health within the LHAs for which data is available (BC Stats 2010). These indicators are compiled in Table 12.2-1. Life expectancy is defined as the length of life an individual from a certain population could expect given their age; the definition does not account for the individual’s quality of life. Nevertheless, life expectancy is an indicator of the population’s general health and the quality of healthcare (DHSS 2004). PYLL refers to the number of years of life lost before an individual reaches a specified age (75 years) and is used as an explicit measure of premature death (Kashaninia 2011).

**Table 12.2-1. Indicators of Health Problems by Local Health Area, 2013**

LHA	Life Expectancy At Birth <sup>1</sup> (Years)	Potential Years of Life Lost <sup>2</sup>		
		Natural Causes (Rate/1,000)	Accidental Causes (Rate/1,000)	Suicides/Homicides (Rate/1,000)
Snow Country ( Stewart)	80.2 <sup>3</sup>	X	X	X
Nisga’a <sup>4</sup>	75.2	36.2	21.8	40.4
Upper Skeena	81.6	43.0	8.9	13.9
Smithers	80.2	32.6	9.9	5.3
Terrace	77.1	55.7	12.6	8.3
British Columbia	82.0	31.4	6.9	3.9

Source: BC Stats (2013)

Notes:

<sup>1</sup> Average for 2007-2011(rate per 1,000 population)

<sup>2</sup> Average for 2006-2010 (rate per 1,000 population)

<sup>3</sup> Source: BC Vital Statistics Agency (2010)

<sup>4</sup>The infant mortality rate for the Nisga’a LHA was zero, likely because there are no hospitals in the Nisga’a LHA and thus most women are assumed to travel to Terrace to give birth.

X - data is unavailable.

### Telegraph Creek Local Health Area Community Health

BC Stats Socio-economic profile data was not available for the Telegraph Creek LHA; however, according to the BC Vital Statistics Agency (2010) life expectancy in Telegraph Creek LHA is 80.2 years, compared to 81.7 years provincially.

As with many Aboriginal communities, diabetes is an issue of rising concern in the Tahltan communities. In Iskut, the number of people diagnosed with diabetes continues to increase. Iskut Valley Health Services (IVHS) provides counselling and nutrition education to diabetes patients, with regular visits to the community by a nutritionist. Sexually transmitted infection prevalence has seen a notable decrease in the past few years (with zero incidences in 2005/06). Suicide is a noted concern in the community, and the nursing staff report threats or attempts on a regular basis (IVHS 2006).

The Tahltan Socio-Cultural Working Group-identified social issues prevalent in the Tahltan Nation were considered to have resulted from a combination of resource development; colonization; residential school syndrome; racism; and insufficient social, health, and education services. A high proportion of social issues within the Tahltan communities are related to drug and alcohol misuse. There is much concern that current programs and support systems are not adequate to deal with the existing issues (TCC 2006).

### Snow Country Local Health Area (Stewart) Community Health

In 2010 there was one suicide in the Snow Country LHA, which resulted in a rate of 1.4 per 1,000 population. In 2010, the population of Snow Country LHA was 541, the average age of the population was 40.7, and life expectancy was 80.2 (BC Vital Statistics Agency 2010).<sup>29</sup>

These numbers are generally consistent with those provided by BC Stats for other communities in the LSA.

### Nisga'a Local Health Area Community Health

Life expectancy in the Nisga'a LHA is around 75 years (Table 12.2-1) as compared to 82 years provincially. In the Nisga'a LHA, the PYLL from natural causes averaged 36.2 years/1,000, which is fairly similar to the provincial rate of 31.4 years. The rate of PYLL from accidental causes, however, averaged 21.8 years/1,000, which is three times the provincial rate of 6.9 years/1,000. PYLL from suicide/homicide in the Nisga'a LHA (40.4 years/1,000 population) was also considerably higher than the provincial average (3.9 years). The Nisga'a LHA was ranked highest in the province (in other words, had the highest number of potential years of life lost) for life expectancy and PYLL from suicide/homicide as compared to other LHAs in the province; the second highest rate in the province is less than half (13.9 years/1,000 in the Upper Skeena LHA) of the rate in the Nisga'a LHA (BC Stats 2011d).

Hospitalization rates and teenage pregnancies provide context for the youth health in the Nisga'a LHA. Among youth (0 to 14 years of age), hospitalization rates for respiratory disease, injury and poisoning (see Table 12.2-2) were more than twice as high in the Nisga'a LHA as compared to the provincial rate (23.5/1,000 versus 9.2/1,000). Hospitalization due to injury as poisoning in the Nisga'a LHA was 8.5 per 1,000 as compared to the provincial figure of 4.4 per 1,000. The Nisga'a LHA has the highest rate of teenage pregnancies in the province with 138.7/1,000, which is more than five times the provincial teenage pregnancy rate of 23.3/1,000.

---

<sup>29</sup> Average from 2006 -2010.

Upper Skeena Local Health Area (Hazelton and Area) Community Health

Life expectancy at birth and PYLL from natural and accidental causes, suicides, and homicide are used as an indicator of the health of a population (BC Stats 2010). Table 12.2-1 shows life expectancy in the Upper Skeena LHA to be 81.6 years, compared to 82 years provincially. In the Upper Skeena LHA, the PYLL from natural causes averaged 43.0 years/1,000, which is slightly higher as compared to the provincial rate of 31.4 years. The rate of PYLL from accidental causes averaged 8.9 years/1,000, which is slightly higher than the provincial rate of 6.9 years/1,000. PYLL from suicide/homicide in the Upper Skeena LHA (13.9 years/1,000 population) was also higher than the provincial average (3.9 years). The Upper Skeena LHA was ranked second highest in the province for PYLL due to suicide/homicide as compared to other LHA's in the province; the highest rate in the province was found in the Nisga'a LHA (BC Stats 2011d).

Between 2009 and 2010, 8,600 visits were made to the emergency room at Wrinch Memorial Hospital. The most common reasons for hospital visits were linked to obesity, diabetes, heart disease, and mental health issues (S. Robertson, pers. comm.).

A socio-cultural needs assessment survey of Gitanyow wilp members carried out in 2010 suggests that over 60% of Gitanyow huwilp identified themselves as being in good or very good health (Marsden 2010). Thirty-four percent reported being in moderate health and only 5% of those surveyed rated themselves as in poor health (Marsden 2010). Chronic illnesses reported by the community include arthritis, diabetes, cancer, and high blood pressure. The majority of respondents were satisfied with their current health services being provided either in Gitanyow or in their community of residence.

In contrast with health services, social services and programs were noted as lacking in the 2010 *Gitanyow Wilp-based Socio-cultural Needs Assessment*. Respondents identified the need for more sports programs, parenting support programs, suicide and drug and alcohol prevention, youth activities, mentoring/life skills programs, and computer resources and activities (Marsden 2010).

Three of the Gitksan Nation communities participated in a mini-health survey, results of which are reported in the March 2012 newsletter of the Gitksan Health Society (2012). Although the sample size and dates of the survey are not reported, respondents from Glen Vowell, Kispiox, and Gitanmaax point to a variety of health issues and concerns in their communities. The three most commonly reported issues in each community were as follows: in Glen Vowell - arthritis, high blood pressure, and smoking; in Kispiox - high blood pressure, arthritis, and smoking; and in Gitanmaax - high blood pressure, arthritis, and being overweight (Gitksan Health Society 2012).

Participants in the mini health survey, when asked about their use of traditional medicines, reported a wide range of berries, leaves, roots, barks, grasses, and blossoms as well as the ubiquitous oolichan grease. Devil's Club and oolichan grease were the most commonly used traditional medicines in all communities (Gitksan Health Society 2012).

In the Gitksan communities, an issue of pressing concern that has recently received provincial and federal attention is the prevalence of suicide, in particular teen suicide. From June to November 2007, there were 59 reported suicide attempts in Gitksan communities. Community leaders and the RCMP have requested assistance from health authorities, the government, and the public (CBC 2007).

Infant mortality rates, hospitalization rates, and teenage pregnancies provide measure of health among youth in the Upper Skeena LHA. The infant mortality rate was 6.3 per 1,000 live births for Upper Skeena LHA, almost double the provincial rate of 3.7. Among youth (0 to 14 years of age), hospitalization rates for respiratory disease, injury, and poisoning were all higher in the Upper Skeena LHA than for the

province as a whole. The hospitalization rate for respiratory disease among youth in the Upper Skeena LHA was 12.3 per 1,000 population, as compared to 9.2 for the province. Hospitalization of youth due to injury or poisoning in the Upper Skeena LHA occurred at a rate of 6.2 per 1,000 as compared to 4.4 per 1,000 for the province. The Upper Skeena LHA also has one of the higher rates of teenage pregnancies in the province at 67/1,000, almost three times the rate for BC (BC Stats 2013).

#### Smithers Local Health Area Community Health

The following section describes health and social indicators for the Smithers LHA, which covers the Town of Smithers, Telkwa, Houston, and the surrounding rural areas and settlements including those near Nanika Lake and Morice Lake.

Table 12.2-1 shows life expectancy in the Smithers LHA to be 80.2 years, compared to 82 years provincially. In the Smithers LHA, the PYLL from natural causes averaged 32.6 years/1,000, which is similar to the provincial rate of 31.4 years. The rate of PYLL from accidental causes averaged 9.9 years/1,000 which is slightly higher than the provincial rate of 6.9 years/1,000. PYLL from suicide/homicide in the Smithers LHA (5.3 years/1,000 population) is just slightly higher than the provincial average of 3.9 years/1,000. Overall, life expectancy at birth, PYLL due to natural causes, accidental causes, and suicides/homicides in the Smithers LHA is similar to the province (BC Stats 2011d).

Infant mortality rates, hospitalization rates, and teenage pregnancies provide context for the youth health in the Smithers LHA. The infant mortality rate was 0.9 per 1,000 live births for Upper Skeena LHA, less than a third of the provincial rate of 3.7/1,000 live births. Among youth (0 to 14 years of age), hospitalization rates for respiratory disease and injury and poisoning were higher in the Smithers LHA than for BC generally. Hospitalization rates for respiratory disease in the Smithers LHA, at 15.5 per 1,000 population, was approximately one-third higher than the provincial figure of 9.2. Hospitalization due to injury and poisoning in the Smithers LHA was 13.3 per 1,000, three times the provincial figure of 4.4 per 1,000. The rate of teenage pregnancies in the Smithers LHA was 30.6/1,000, higher than the provincial teenage pregnancy rate of 23.3/1,000 (BC Stats 2013).

#### Terrace Local Health Area Community Health

Life expectancy at birth and PYLL from natural and accidental causes, suicides, and homicide are used as an indicator of the health of a population (BC Stats 2013). Life expectancy in the Terrace LHA is just over 77 years, half a decade below the provincial median. In the Terrace LHA, the PYLL from natural causes averaged 55.7 years/1,000, substantially higher than the provincial rate of 31.4 years/1,000. The rate of PYLL from accidental causes averaged 12.6 years/1,000, which is approximately twice as high as the provincial rate of 6.9 years/1,000. PYLL from suicide/homicide in the Terrace LHA (8.3 years/1,000 population) is double the provincial average of 3.9 years/1,000. Overall, in the Terrace LHA, PYLL due to natural causes is almost double, PYLL due to accidental causes is almost double, and the PYLL due to suicides and homicides is slightly more than double, as compared to the provincial figures for each (BC Stats 2011d).

Infant mortality rates, hospitalization rates, and teenage pregnancies provide context for the youth health in the Terrace LHA. The infant mortality rate was 5.7 per 1,000 live births for the Terrace LHA; 2% higher than the provincial rate of 3.7. Amongst youth (0 to 14 years of age), hospitalization rates for respiratory disease, injury, and poisoning were more than double in the Terrace LHA as compared to provincial figures. Specifically, hospitalization rates for respiratory disease in the Terrace LHA were 20.9 per 1,000 population, more than double the provincial figure of 9.2. Hospitalization due to injury and poisoning in the Terrace LHA was 11.9 per 1,000, almost three times the provincial figure of 4.4 per 1,000. The rate of teenage pregnancies in the Terrace LHA was 50.6/1,000, more than double the provincial teenage pregnancy rate of 23.3/1,000 (BC Stats 2013).



### 12.2.2 Children at Risk

The children at risk indicator is based on the infant mortality rate, the rate of children in care, the percentage of children below standard reading levels, and percentage of children receiving income assistance (BC Stats 2013).

#### 12.2.2.1 Infant Mortality

Table 12.2-2 indicates the infant mortality rate for the Nisga’a LHA as zero, likely because there are no hospitals in the Nisga’a LHA and women likely travel to Terrace to give birth. The infant mortality rate for the Upper Skeena LHA is 6.3/1,000, which is slightly higher than the rate for Terrace (5.7/1,000), and notably higher than both the provincial rate (3.7/1,000) and the rate for Smithers (0.9/1,000).<sup>30</sup>

**Table 12.2-2. Children at Risk Indicators by Local Health Area (Year)**

Location	Infant Mortality Rate <sup>1</sup> (Rate/1,000)	Children in Care <sup>2</sup> (Rate/1,000)	Hospitalization Rates <sup>3</sup>		Below Standard Reading (Grades 4 and 7) <sup>4</sup> (%)	Children Aged 0-18 Years Receiving Income Assistance <sup>5</sup>	
			Respiratory Disease (Rate/1,000)	Injury and Poisoning (Rate/1,000)		<1 Year (%)	>1 Year (%)
Nisga’a LHA	0.0	19.8	23.5	8.5	69.3	X	X
Upper Skeena LHA	6.3	21.9	12.3	6.2	48.9	6.8	5.2
Smithers	0.9	10.5	15.5	13.3	19.3	1.8	2.2
Terrace	5.7	17.0	20.9	11.9	26.3	5.3	5.4
British Columbia	3.7	9.1	9.2	4.4	20.2	1.6	1.9

Source: BC Stats 2010

Notes:

<sup>1</sup> Number of deaths of children under one year old per 1,000 births , average for 2007-2011.

<sup>2</sup> Number of children taken into custody by Child Care per 1,000 population aged 0-18 years, as of Dec. 2011.

<sup>3</sup> Average 2010-2011 for children aged 0-14

<sup>4</sup> Below standard reading (grades 4 and 7) is the percentage of students taking exams that scored below standard average for 2008/09 and 2010/11.

<sup>5</sup> Percentage of population aged 0-15 years receiving income assistance for less than a year and percentage of population aged 0-15 years receiving income assistance for more than a year. September 2011.

X - data suppressed

#### 12.2.2.2 Children in Care

The rate of children in care for the Nisga’a LHA (19.8/1,000 children) and the Upper Skeena LHA (21.9/1,000 children) were both more than double the provincial rate (9.1/1,000 children); Terrace (17.0/1,000) was slightly less than double the provincial rate, while the rate for Smithers (10.5/1,000) was most similar to that of the province.

<sup>30</sup> Caution is necessary when comparing percentages or rates per thousand between very small and very large populations because the incremental effect of a single incident is larger for the smaller population and may exaggerate the difference between the two populations. For example, one additional serious crime in a Nisga’a village would increase the rate per 1,000 from 25 to 25.53, whereas at the provincial scale the serious crime rate of 10/1000 would increase to 10.0002/1000 with the addition of one more serious crime.

### 12.2.2.3 Child Reading Levels

The percentage of students falling below provincial reading standards in the Nisga'a LHA (69.3%) was over three times the provincial average of 20.2%, over three times the average for Smithers (19.3%), more than double the rate for Terrace (26.3%), and notably higher than the Upper Skeena LHA (48.9%).

### 12.2.2.4 Income Assistance

Table 12.2-2 also indicates that the percentage of children residing in the Upper Skeena LHA receiving income assistance for more than one year (6.8%) was slightly higher than Terrace (5.3%), substantially higher than Smithers (1.8%), and four times the provincial figure of 1.6%. However, the percentage of children receiving income assistance for less than one year was highest in the Terrace LHA (5.4%), followed by the Upper Skeena LHA (5.2%). The rate of children receiving income assistance for less than a year was much lower in Smithers LHA (2.2%) and across BC in general (1.9%).

For all measures of children at risk, those residing in the Smithers LHA scored lower than Terrace and seem to more closely resemble provincial figures. Notably, the percentage of lone parents in the Smithers LHA was low at 20.0%, as compared to Terrace at 27.9% and the provincial rate of 25.7% (BC Stats 2010).

For all measures of children at risk, the rates and figures of those residing in the Nisga'a LHA were relatively high as compared to other LHAs. Rates and figures for the Upper Skeena LHA more closely resembled Terrace, both of which generally lagged behind the province. Rates for the Smithers LHA were similar to, and in some cases lower than that of the province. Notably, the percent of lone parents in the Upper Skeena LHA was high at 41.8%, as compared to the Nisga'a LHA at 32.9%, the Terrace LHA at 27.9%, and the overall rate for the province at 25.7%. Further, the average annual income of female lone parents residing in the Nisga'a LHA (\$29,671), the Upper Skeena LHA (\$32,632), and the Terrace LHA (\$31,907) were between \$13,000 and \$10,000 less than the provincial average for female lone parents (\$43,491). Female lone parent households in Smithers appeared to fair slightly better with an average annual income of \$40,054.

### 12.2.3 Youth at Risk

Youth at risk is measured by the percentage of young adults (age 15 to 24 years) receiving social assistance, the percentage of young adults who did not graduate from high school, and the serious crime rate by juveniles (age 12 to 17 years; see Table 12.2-3; BC Stats 2013).

**Table 12.2-3. Indicators of Youth at Risk by Local Health Area (Year)**

LHA	Young Adults Aged 19-24 Years Receiving Income Assistance <sup>1</sup>		Teenage Pregnancies <sup>2</sup> (rate/1,000)	Young Adults Aged 18 Years Who Did Not Graduate <sup>3</sup> (%)	Serious Crime Rates By Juveniles Aged 12-17 Years <sup>4</sup> (Rate/1,000)
	Total (%)	>1 Year (%)			
Nisga'a	X	X	138.7	72.1	20.9
Upper Skeena	4.4	2.4	67.0	68.0	13.5
Smithers	2.3	1.2	30.6	22.6	7.8
Terrace	5.3	2.6	50.5	47.0	6.8
British Columbia	1.6	0.5	23.3	27.9	3.8

Source: BC Stats (2013)

Notes:

<sup>1</sup> As of September 2011

<sup>2</sup> For women 15-19 years of age.

<sup>3</sup> Average for 2008/2009 and 2010/2011

<sup>4</sup> Average for 2008-2010

X - data suppressed

#### 12.2.3.1 *Young Adults on Income Assistance*

Data for the percentage of young adults receiving income assistance was not available for the Nisga'a LHA. The total percentage of young adults receiving income assistance in September 2011 was highest in Terrace (5.3%), although all of the LHAs being considered here had rates for young adults on income assistance above the provincial rate of 1.6%.

#### 12.2.3.2 *Young Adult Graduation*

The percentage of young adults who did not graduate was substantially higher in the Nisga'a LHA (72.1%), the Upper Skeena LHA (68.0%), and the Terrace LHA (47.0%) as compared to the Smithers LHA (22.6%) and the province (27.9%).

#### 12.2.3.3 *Teenage Pregnancies*

As mentioned earlier (Section 12.2.1), an analysis of health indicators in northern BC indicated the Nisga'a LHA had the highest number of teenage pregnancies at 138.7 per 1,000, more than double, and in a few cases triple, the number of teenage pregnancies in other LHAs.<sup>31</sup> For example, the provincial average per 1,000 population was 23.3, the rate in Upper Skeena was 67.0, the rate in Terrace was 50.5, and the rate for Smithers was 30.6. At the low end, Stewart (located in the Snow Country LHA) reported two teenage pregnancies between 2005 and 2009 which is equivalent to the rate of 2.8 per 1,000 (BC Stats 2013). High incidence of teenage pregnancy is linked to lower rates of high school completion, as young mothers, of necessity or choice, elect to stay home for a period of time after giving birth while young fathers may feel compelled to seek employment to provide for their family.

#### 12.2.3.4 *Juvenile Crime*

The percentage of serious crime by juveniles was higher in the Nisga'a LHA (20.9%) and Upper Skeena LHA (13.5%) as compared to Smithers (7.8%), Terrace (6.8%), and particularly the province (3.8%; BC Stats 2013).

Aboriginal communities in Canada experience higher rates of suicide as compared to the general population. Youth suicide and attempted suicide is of particular concern in First Nations communities. In a 2007 report, the Aboriginal Healing Foundation states that for Aboriginal communities, more often than not, suicide is an affliction of the young, accounting for over one-third for deaths among Aboriginal youth. The report also notes that suicide rates contribute to indices of community health and well-being and are an indicator of community distress (Aboriginal Healing Foundation 2007). PYLL due to suicide/homicide was 40.4% in the Nisga'a LHA, 13.9% in the Upper Skeena LHA, 8.3% in the Terrace LHA, 5.3% in the Smithers LHA, and 3.9% provincially (BC Stats 2009f).<sup>32</sup>

### 12.2.4 **Economic Hardship**

BC Stats uses the percentage of the population receiving income assistance and the percentage of seniors receiving maximum income support as indicators of economic hardship (Table 12.2-4; BC Stats 2013).

The percentage of the population receiving income assistance was similar in the Upper Skeena (5.2%) and Terrace (5.1%) LHAs, higher as compared to the rate in Smithers (2.4%), and over two times the provincial rate which was just below two per cent (1.9%). The percentage of seniors receiving maximum income support was comparatively high at 13.3% in the Nisga'a LHA as compared to other relevant LHAs. Notably, the percentage of seniors receiving maximum income support in both the Terrace and Smithers LHAs at 3.1% was lower than the provincial average

---

<sup>31</sup> Average 2008-2010 for women aged 15-19.

<sup>32</sup> Average 2006 - 2010 (BC Stats 2010).

**Table 12.2-4. Indicators of Economic Hardship by Local Health Area (Year)**

LHA	Population Aged 0-64 Years On Income Assistance <sup>1</sup>			Seniors Receiving Maximum IS <sup>2</sup>
	Total (%)	>1 Year (%)	>1 Year (%)	
Nisga'a	X	X	X	13.3
Upper Skeena	5.2	2.6	2.5	5.8
Smithers	2.4	1.4	0.9	1.7
Terrace	5.1	2.6	2.4	2.6
British Columbia	1.9	1.0	0.9	3.1

Source: BC Stats 2010

Notes:

<sup>1</sup> As of September 2011

<sup>2</sup> As of December 2011

X - data is suppressed

IS - Income Support

In 2005, the percent of individuals residing in the Upper Skeena LHA who relied on government transfer payments was 25%, as compared to 18% in the Terrace LHA, 16% in the Nisga'a LHA, 12% in the Smithers LHA, and 15% provincially. Livelihoods and self-worth are often associated with gainful employment. In 1991, in the Hazelton area, forestry accounted for 39% of basic income and the public sector accounted for approximately 20%. In 1996, the forestry sector dropped slightly to account for 36% of basic income; however, the amount of basic rates for the public sector increased at that time (1996) to account for 35% of basic income. In 2001, the forestry sector supported 28% of all jobs in the Upper Skeena LHA and the public sector supported approximately 34% of jobs in the Upper Skeena LHA. Since 2001, job losses have occurred in both the forestry and public sectors, from mill closures and the closure of public offices. Notably, the distribution of basic income from government transfers was 13% in 1991, 10% in 1996, and increased to 28% in 2001 (Robinson Consulting and Associates Ltd; Timberline Forestry Inventory Consultants Ltd. 2006).

It would appear that for many LSA communities issues of economic hardship, as exemplified by rates of dependence on government support payments, are tightly coupled to the fortunes of resource industries in north west BC, especially forestry.

### 12.2.5 Crime and Related Social Issues

The measurement of crime used by BC Stats includes total serious crime, serious crimes per police officer, property crime, and violent crime (BC Stats 2010).

In Nisga'a LHA, crime rates are substantially higher than provincial rates, particularly for serious crimes, while the crime rate for the Smithers LHA is below the provincial rate (Table 12.2-5; BC Stats 2013). Notably, the rates of violent crime are highest in the Nisga'a LHA. The Upper Skeena and Terrace LHAs are similar to each other across the board, and moderate in all categories as compared to Nisga'a LHA. Smithers' rates the lowest in terms of crime statistics, which are at or below provincial averages. This pattern matches that of children at risk in that Smithers is most similar to provincial rates, while the Terrace and Upper Skeena LHAs have similar rates to each other and are slightly worse off than Smithers.

**Table 12.2-5. Indicators of Crime<sup>1</sup>, by Local Health Area**

LHA	Violent Crime (rate/1,000)	Property Crime (rate/1,000)	Total Serious Crime (rate/1,000)	Serious Crime (rate/Police Officer)
Nisga'a	7.7	10.9	18.6	9.1
Upper Skeena	4.9	9.1	14.0	8.9
Smithers	3.5	6.9	10.4	8.2
Terrace	4.5	9.8	14.4	8.0
British Columbia	3.3	7.8	11.1	7.7

Source: BC Stats 2010

Notes:

<sup>1</sup> Average from 2008-2010.

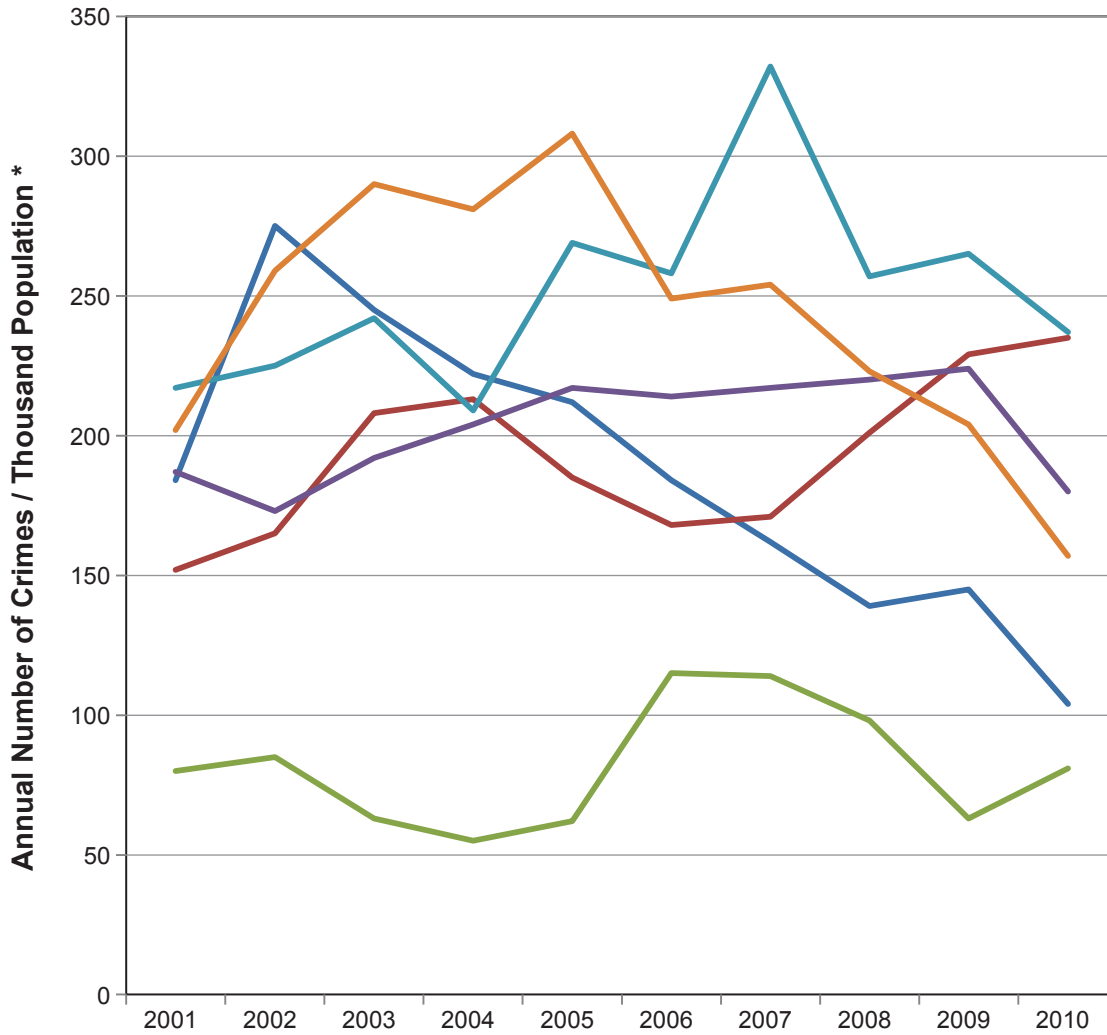
The RCMP collects crime rate statistics by police province which are then compiled into regional profiles. Crime rates for police administrative provinces that more or less coincide with the locations and general areas occupied by the LSA communities are presented in Figure 12.2-1.

The Dease Lake police administrative province, which includes the Tahltan communities, experienced a decrease in the crime rate by almost half (-43.4%) between 2001 and 2010 (see Figure 12.2-1). The crime rate in Stewart rose and fell over the decade, but overall there was no notable increase or decrease in the crime rate. The crime rate in Stewart is well below that of the other LSA communities (BC Stats 2013).

Between 2008 and 2010, the total serious crime rate (number of crimes per 1,000 population) in Nisga'a LHA 92, was 18.6, nearly 50% above the provincial rate of 11.1 (BC Stats 2011d). The number of serious crimes per police officer in the Nisga'a LHA (9.1) was slightly higher than the BC average (7.7). Out of all LHAs in BC, the rates of violent crime were highest in the Nisga'a LHA. The percentage of serious crime by juveniles was higher in the Nisga'a LHA (20.9%) compared to the province (3.8%; see Table 12.2-5). The Nisga'a LHA experienced a decrease in the crime rate (-23.1%) over the same period, including a large drop in property crime (-35.5%) and a slight increase in violent crime (4.9%; BC Stats 2013).

Between 2001 and 2010 the New Hazelton police province (which includes Gitxsan and Gitanyow communities) experienced an almost 55% increase in its crime rate (Figure 12.2-1). It is the only police province in the region in which there has been a persistent upward trend in the crime rate in recent years. This appears to be contradicted by BC Stats data in which a comparison of the two-year average for 2005 to 2007 versus 2008 to 2010 indicates a 12.5% reduction in the overall crime rate for the Upper Skeena LHA, including declines of 2.5 and 17.5% for violent crime and property crime (Table 12.2-5), respectively (BC Stats 2013). Anecdotally, local residents of the Hazeltons observe that there are minimal crime concerns and that the communities are generally "safe" (P. Weeber and B. Faasnidge, pers. comm.; A. Maitland and B. Smith, pers. comm.).

The overall occurrence of serious crimes for the Smithers LHA is slightly lower than the provincial average and considerably below the other LHA's reported in the Table 12.2-5 (BC Stats 2013). However, between the periods of 2003 to 2005 and 2006 to 2008, the incidence of serious violent crime increased 43%, while over the same period the occurrence of serious property crime decreased by 27% (BC Stats 2009f). Rates of serious juvenile property crimes are about five times those of the province, although violent juvenile crimes rates are below provincial rates (BC Stats 2009f). Rates of spousal assault crimes in Smithers were 63% higher than that of the province. Child abuse was also slightly more common, and approximately 1% of children (18 years and under) were in care in December 2009, which is marginally higher than the provincial percentage (BC Stats 2009f).



Source: Police Services Division (2011).

Note: \* The Crime Rate is the number of Criminal Code offences or crimes (excluding drugs and traffic) reported for every 1,000 permanent residents.



**Crime Rates for Local Study Area Communities:  
2001 to 2010**

Figure 12.2-1

## SOCIO-ECONOMIC BASELINE REPORT

The overall occurrence of serious crimes (including violent and property offences) in Terrace (41.8) is significantly higher than the provincial average (13.5). Rates for serious juvenile crime (18.3) are also over four times those of the province (4.2). However, rates of serious crime in Terrace decreased by 21.3% between 2003 and 2008 (BC Stats 2009f). Drug-related offences and motor vehicle theft were both more common than the BC average. The rate of child abuse (10.5 per 1,000) and children in care (16.4 per 1,000) were higher than the provincial rates (7.0 and 9.4; BC Stats 2009f).

The crime rate in the City of Terrace has risen and fallen in the years between 2001 and 2010. Overall, the crime rate has dropped 3.7% in that time period (Figure 12.2-1; BC Stats 2013).

## 13. Community Infrastructure and Services



## 13. Community Infrastructure and Services

---

### 13.1 HOUSING AND INFRASTRUCTURE

The availability of suitable housing is an important measure of a community's capacity to absorb additional people that might be expected to migrate to the region in response to the economic opportunities associated with resource development projects in the vicinity of the RSA and LSA.

#### 13.1.1 Regional Study Area

Table 13.1-1 shows the number of private dwellings in each of the LSA communities in 2001, 2006, and 2011. Slight decreases in the number of private dwellings are likely a result of boundary changes, or changes in Statistics Canada definitions and data collection methods. Overall increases in the number of private dwellings were experienced in Dease Lake, Smithers, and Terrace. In broad terms regional infrastructure is adequate and in several cases recently upgraded. The larger communities are for the most part well serviced and relatively minor housing concerns. Aboriginal communities, both reserve communities and Nisga'a villages community have concerns about the adequacy of housing both with respect to supply and overall condition. It is not uncommon for Aboriginal communities to have serviced lots that remain vacant for many years due to lack of funds to build (Brucejack Project Research Program 2012c).

Levels of over-crowding are likely much more pronounced than the census figures suggest as exemplified by the following excerpt from a recent key informant interview in one of the Gitksan communities (Brucejack Project Research Program 2012c).

*There are 125 houses and about two or three families in each house on reserve. The band is responsible for housing maintenance. The community is running out of space and there's no place to build new homes. We've been given land on the other side of the river - but we don't have the money to build a bridge. And it would cost 10 million dollars to service that land (water/sewer). One year the government said there would be money to do this, but then nothing happened.*

The range of basic community infrastructure is summarized in Table 13.1-2. In general terms communities have adequate water, sewage, and solid waste disposal for current population levels and could likely absorb some increase in demand as well. Power is generally stable and secure although those dependent upon diesel generators are vulnerable to loss of power if the supply of diesel fuel cannot be maintained. Primary transportation routes are paved for the most part although Telegraph Creek is the particularly isolated. Kispiox, and Glen Vowell have only a single connecting road to other communities and larger centres as does the District of Stewart. Rail is mainly oriented to connecting major centres such as Smithers and Terrace to Prince Rupert and the south of BC. Highways 16 (east-west) 37 (north-south), 37 A (the overland connection for Stewart to hwy 37) are all paved and in reasonably good condition. The Nisga'a villages are connected via Hwy 113 both north and south. All highways experience potentially dangerous winter driving conditions.

#### 13.1.2 Dease Lake and Tahltan Nation Communities

According to the 2011 census, there are 160 private dwellings in Dease Lake (Statistics Canada 2012a). As shown in Table 13.1-1, the number of private dwellings in Dease Lake has increased by 23% since 2001.

Table 13.1-1. Private Dwellings in Local Study Area Communities, 2001 to 2011

Community	Total Private Dwellings 2001	Total Private Dwellings 2006	APH <sup>1</sup> 2006	Total Private Dwellings 2011	APH 2011	Dwellings Built Pre-1986 (% of Total)	% in Need of Major Repair <sup>6</sup>
Dease Lake	130	150	2.6	160	1.9	no data	no data
Dease Lake 9	23	21	3.2	17	3.4	0%	0%
Iskut 6	99	101	3.3	82	2.5	25%	35%
Telegraph Creek	90	98	4.1	56	2.9	15%	0%
<i>Subtotal: Tahltan reserve communities</i>	<i>212</i>	<i>220</i>	<i>3.0</i>	<i>155</i>	<i>2.8</i>	<i>35%</i>	<i>21%</i>
Stewart	473	307	1.6	379	1.3	89%	0%
Gitlaxt'aamiks	233	254	31.7	269	3.4	42%	42%
Gitwinksihlkw	57	58	3.5	59	3.7	64%	46%
Laxgalts'ap <sup>5</sup>	151	132	3.6	134	3.6	no data	no data
Gingolx	134	114	3.0	143	3.2	29%	33%
<i>Sub-total Nisga'a Lands</i>	<i>575</i>	<i>558</i>	<i>3.3</i>	<i>605</i>	<i>3.5</i>	<i>no data</i>	<i>no data</i>
Hazelton	155	154	1.9	135	1.8	no data	no data
New Hazelton	323	309	2.0	313	2.4	no data	no data
Gitanmaax	225	242	3.0	227	3.2	33%	36%
Gitsegukla	137	223	3.2	135	4.1	37%	37%
Gitwangak	147	155	3.0	153	3.3	50%	57%
Glen Vowell <sup>1</sup>	67	76	3.0	75	3.2	43%	36%
Kispiox	211	216	2.9	214	3.2	50%	40%
<i>Subtotal: Gitxsan Nation reserve communities</i>	<i>787</i>	<i>912</i>	<i>3.0</i>	<i>804</i>	<i>3.4</i>		
Gitanyow	93	104	3.7	112	4.1	50%	32%
Smithers	2,195	2,172	2.4	2,265	2.4		5%
Terrace	4,611	4,682	2.4	4,861	2.4		
British Columbia					2.5	62%	7%

Source: Statistics Canada (2002a, 2007b, 2012a)

Notes:

<sup>1</sup> APH = Average Persons Per Household

<sup>2</sup> Statistics Canada refers to Glen Vowell as Sik-e-dakh 2.

<sup>3</sup> Telegraph Creek is comprised of Telegraph Creek 6, Telegraph Creek 6A, and Guhthe Tah 12.

<sup>4</sup> Statistics Canada has suppressed the 2006 Census data for Telegraph Creek 6 and 6A.

<sup>5</sup> Calculated by Rescan using 2006 and 2011 Statistics Canada population housing data.

<sup>6</sup> Statistics Canada has suppressed the 2006 data for Laxgalts'ap.

<sup>7</sup> Data were reported as a total number of dwellings requiring major repairs as opposed to a percentage. Percentage calculated by dividing number of dwellings requiring major repair by the total number of private dwellings.

Only 60 of the homes (40%) were owned rather than rented. In 2006, one-third of all dwellings in Dease Lake were constructed prior to 1986; however, only 6.7% of homes were considered in need of major repair. The average number of people per household (2.5) was exactly on par with the provincial average (Table 13.1-1). The average value of an owned dwelling in Dease Lake in 2006 was \$120,417 (Statistics Canada 2007a).

**Table 13.1-2. Community Infrastructure and Utilities**

Community	Water	Wastewater and Sewage	Solid Waste	Energy	Communications	Air Transport
Dease Lake	Private wells; supplied by tanker	Individual septic systems	landfill; no pick-up service	Micro-hydro at Hluey Lake Micro Hydro	Telephone, HSIS	1,828 m paved runway.
Telegraph Creek	2 community wells with central reservoir		RDKS landfill; no pick-up	6 diesel generators (4 at 300kW, 500kW, 600kW)	Telephone, HSIS	1,524 m gravel airstrip.*
Iskut	Surface; reservoir	Individual septic systems	RDKS landfill; no pick-up	BC Hydro Diesel generators	Telephone, HSIS	1,097 m gravel airstrip.*
Stewart	Full municipal water system	Sewage lagoon system - capacity for 6K	Landfill	BC Hydro; Pacific Northern Gas	Telephone; HSIS; Cellular; Cablevision; AM/FM radio from Terrace and Prince Rupert; local newspaper	1,189 m paved runway.*
Gingolx	SST; Ground; 1984**	Sanitary sewage system	Nisga'a landfill near Gitlaxt'aamiks	BC Hydro	Telephone; HSIS (enTel)	
Laxgalts'ap	SST; Ground; 1984**			BC Hydro	Telephone; HSIS (enTel)	
Gitwinksihlkw	SST; Surface; 1981/2012	Sanitary sewage system		BC Hydro	Telephone; HSIS (enTel)	
Gitlaxt'aamiks	SST; Surface; 1963/1994	Sanitary sewage system		BC Hydro	Telephone; HSIS (enTel)	
Hazelton	Level III; Surface; 1994 (shared with Gitanmaax)	Sanitary sewage system (shared with Gitanmaax)	landfill located one km east of New Hazelton	BC Hydro; Pacific Northern Gas	Telephone; HSIS; Cellular; Cablevision	
New Hazelton	Surface from Station Creek; 2000	Sanitary sewage system	landfill located one km east of New Hazelton	BC Hydro; Pacific Northern Gas	Telephone; HSIS; Cellular; Cablevision	
Gitanyow	SST <sup>1</sup> ; Ground; 1992**	Sanitary sewage system		BC Hydro	Telephone; HSIS;	
Gitwangak	SST; Ground; 1972**	Sanitary sewage system		BC Hydro	Telephone; HSIS <sup>2</sup> ; Cellular	

(continued)

**Table 13.1-2. Community Infrastructure and Utilities (completed)**

Community	Water	Wastewater and Sewage	Solid Waste	Energy	Communications	Air Transport
Gitsegukla	Level III; Surface; 1991			BC Hydro	Telephone; HSIS; Cellular	
Kispiox	Level II; Ground; 2005			BC Hydro	Telephone; HSIS; Cellular	
Glen Vowell	Level II; Surface; 1998			BC Hydro		
Gitanmaax	Level III; Surface; 1994	Sanitary sewage system		BC Hydro		
Smithers	Full municipal water system - capacity for 7,500	Sanitary sewage system - capacity for 8,000	Landfill and curbside pickup; 30+ year capacity	BC Hydro; Pacific Northern Gas	Telephone; HSIS; Cellular; Cablevision; AM/FM radio from Smithers and Terrace; local newspaper	Paved runway: 2,300 m. Scheduled service to multiple locations in BC
Terrace	Full municipal water system - current capacity 2X current demand;	Sanitary sewage system - built in 1987, multiple upgrades.	Landfill and curbside pickup; 50 year capacity	BC Hydro; Pacific Northern Gas	Telephone (incl. fibre optics network); HSIS; Cellular; Local TV station (only one in RSA); Cablevision; AM/FM radio from Terrace; 2 local newspapers	Two paved runways: 2,286 m and 1,638 m. Scheduled service to multiple locations in BC

Source: Brucejack Project Research Program (2012a, 2012b, 2012c), Rescan (2013d)

Statistics Canada census data provides an overview of private dwellings in Tahltan reserve communities. Between 2001 and 2006, the number of private dwellings increased slightly in all communities, except Dease Lake 9, from a total of 212 to 220. Between 2006 and 2011, however, the total number of private dwellings dropped to a total of 155 for all Tahltan reserve communities (Table 13.1-1). Further research would be required to better understand these trends.

In all Tahltan reserve communities, more than half of the housing stock has been constructed between 1986 and 2006, an indication that homes are relatively new. However, the rates of dwellings in need of major repairs in both Iskut and Tahltan Indian Band communities were notably higher than the provincial rate. The Tahltan communities also experience higher rates of crowding as compared to the provincial average. In Dease Lake 9, for example, the rate of people per household is almost double (4.5) that of the province (2.5; Statistics Canada 2012a).

According to the 2007 Tahltan Census, 67% of all Tahltan houses were between 10 and 30 years old. Only 4% of the houses were less than 10 years old, while 19% were over 30 years old. Twenty-eight percent of reserve members own their homes while 24% rent. The Tahltan Nation owns 15% of reserve housing, and 9% is social housing administered by Canadian Mortgage and Housing Corporation (Rescan 2013d).

### 13.1.3 Stewart

The District of Stewart reported a total of 217 occupied private dwellings in 2011; 86% of these were single detached houses, the remainder were classified as “movable dwellings” or “other dwellings” (the latter of which includes apartment-style housing). The number of private dwellings in Stewart has decreased by 19.8% between 2001 and 2011 (Table 13.1-1). Total private dwellings amount to 379, indicating that many dwellings in Stewart remain vacant. The average of 2.3 persons per household is slightly less than the provincial average of 2.5 (Table 13.1-1; Statistics Canada 2012b).

According to the 2006 census, the vast majority of dwellings in Stewart (89%) were constructed prior to 1986—mostly in the 1960s and 1970s—although none were reported as in need of major repairs (Statistics Canada 2012b). Community leaders generally consider Stewart’s housing stock to be in fair condition (A. Danuser and S. McFee, pers. comm.). The majority of these (80%) were owned by their occupants, with average monthly payments of around \$382. The remainder were rented at an average rate of \$466 per month.

The median value of houses in Stewart dropped from \$99,000 in 2001 to \$60,000 in 2006 (Statistics Canada 2002c, 2007a; NDIT 2010f) due to the area’s continuing economic struggles.

Community infrastructure is summarised in Table 13.1-2. Much of the existing infrastructure was installed in the 1960s and is nearing the end of its useful life. Infrastructure repair and replacement is a key issues confronting the district. Grants for improving existing infrastructure are available, but there is a lack of funds to maintain existing infrastructure or to cover operating costs (A. Danuser and S. McFee, pers. comm.).

### 13.1.4 Nisga’a Nation

The Nisga’a villages and village-based housing committees are responsible for daily operations and delivery of management, financing, renovations, and new construction of housing in Nisga’a villages. The average housing values for single-family homes on Nisga’a Lands ranged from \$130,000 to \$150,000 (NLG et al. 2010).

The villages of Gitlaxt'aamiks, Gitwinksihlkw, and Laxgalts'ap have developed housing subdivisions with serviced lots available for purchase. In Gingolx, the amount of viable land for housing is limited as the community is surrounded by marshlands. The community has focused on redeveloping its current housing stock. Only four new homes have been built in Gingolx over the past 10 years, bringing the total number of homes to 113 in the spring of 2012. In 2012, the Gitlaxt'aamiks housing authority reported 310 homes in the community with eight people on the waiting list. The Village of Gitwinksihlkw reported a total of 50 homes in the spring of 2012 (Rescan 2013c; Appendix 29-A). Total private dwellings in all Nisga'a villages decreased by 2.9% between 2001 and 2006, but then increased 8.4% between 2006 and 2011 (Table 13.1-1; Statistics Canada 2012b).

According to the 2006 census, the number of people per household in Nisga'a villages ranged between 3.2 and 3.7 that year, well above the provincial average (Table 13.1-2; Statistics Canada 2012b). In 2006, the villages of Gingolx, Gitwinksihlkw, and Gitlaxt'aamiks had a total of 400 occupied private dwellings, approximately 40% of which were constructed prior to 1986. The rate of housing in need of major repairs was notably higher in Nisga'a villages (33.3% to 45.5%) compared to the provincial rate (7.4%; Statistics Canada 2007a).

NLG and the individual Nisga'a villages are responsible for the provision of community utilities, infrastructure, and related services such as water, sewer, and garbage collection/landfill within Nisga'a Lands (see Table 13.1-2).

### **13.1.5 The Hazeltons and Skii km Lax Ha, Gitxsan Nation, and Gitanyow First Nation**

#### The Hazeltons

Table 13.1-1 shows the number of private dwellings in Hazelton and New Hazelton in 2001, 2006, and 2011. Both experienced a decrease in the number of private dwellings between 2001 and 2006, which continued for Hazelton into 2011. However, the number of private dwellings increased between 2006 and 2011 in New Hazelton.

Hazelton has a higher proportion of older housing built prior to 1986 (80.6%) than New Hazelton (69.2%), although not out of line with the average across the RDKS where slightly more than three quarters of the housing was built pre-1986. The number of dwellings requiring major repair in New Hazelton (19.2%), and Hazelton (25.8%) are higher than in the RDKS (17.5%) and significantly higher than the provincial average (7.4%). Overcrowding is not an issue in either community. The lower than average number of occupants in Hazelton is perhaps indicative of the depopulation that has afflicted communities in the region due to the economic challenges of recent decades (See Table 13.1-1).

In 2006, the average single-family home in both the Village of Hazelton and District of New Hazelton was \$103,675 (NDIT 2010b, 2010f). The percentage of owned versus rented dwellings was approximately equal (Statistics Canada 2007a). The community also has rental accommodations, including apartment buildings and duplexes.

The quality of infrastructure is considered to be improving and capable of accommodating a growing population. However, local leaders report that municipal services are under-resourced as demand from unincorporated communities and band governments for municipal services grows due to their own shortfalls and increasing needs (A. Maitland and B. Smith, pers. comm.).

BC Transit runs the Hazeltons' Regional Transit System, which offers limited bus service throughout the Hazeltons, as well as service between the Hazeltons and Smithers (BC Transit 2009).

### Gitxsan Housing

Table 13.1-1 indicates that the number of private dwellings for all Gitxsan communities increased between 2001 and 2006, and then decreased between 2006 and 2011. The largest fluctuations appear to have occurred in Gitsegukla, which saw an increase of 86 private dwellings between 2001 and 2006 followed by a decline of 88 dwellings by 2011.<sup>33</sup> Over that time period, a similar trend was noted in Gitanmaax, although the rise and fall in the housing stock was limited to fewer than 20 private dwellings in both instances.

Fifty percent of private dwellings in Gitwangak and Kispiox were constructed prior to 1986, and not surprisingly the percentage of dwellings in need of major repairs is highest in those communities (see Table 13.1-1). Overall the percentage of dwellings requiring major repairs in the Gitxsan communities ranges from five to more than seven times the provincial figure of 7.4%. The percentage of homes requiring major repairs in Gitwangak is almost eight times that of the province (7.4%). Gitsegukla has more people per household (4.1) than the other four communities which range between 3.2 to 3.3 persons per household versus a median of 2.5 persons per household for the Province (see Table 13.1-1).

### Gitanyow

Overall, Gitanyow has experienced an increase in the number of private dwellings over the past decade, but as with many Aboriginal communities in northern BC overcrowding remains a problem.

In 2006, more than half of all private dwellings in Gitanyow were built prior to 1986. The proportion of dwellings requiring major repair in Gitanyow was 31.6%, approximately four times that of the province. Further, the average number of people per household in Gitanyow (4.1) was nearly double that of the province (2.5).

The community currently consists of 125 buildings, including five business and two six-plex rental buildings, fully serviced with untreated water from a local reservoir and sewer facilities (Brucejack Project Research Program 2012c). Most buildings on-reserve are detached three-bedroom homes, half of which are owned and maintained by the Band office. Ninety-eight families, both on- and off-reserve, are currently on the waiting list for new homes. Marsden (2010) notes that 64% of Gitanyow wíl̓p members were not satisfied with their current housing situation. Issues with housing were primarily overcrowding and need for renovations. Mould was also cited as a major problem.

#### **13.1.6 Smithers**

The town of Smithers had 2,192 occupied private dwellings in 2011 (Statistics Canada 2012b). Approximately 64% of these dwellings were single detached houses, with 7.5% being “movable dwellings,” and 27.8% being “other dwellings” (which includes semi-detached houses, row houses, apartments, and duplexes). The average number of persons per household (2.4) is about equal to the provincial median (2.5).

As shown in Table 13.1-1, the number of private dwellings in Smithers has increased by 3.2% between 2001 and 2011.

---

<sup>33</sup> Although Statistics Canada did not indicate a boundary change over these time periods, the sharp increase and decrease in the number of private dwellings in Gitsegukla is likely a result of data collection methods, rather than an actual housing boom and then loss.

According to the 2006 census, 68.3% of private dwellings in Smithers were owned rather than rented. Seventy percent of dwellings were constructed prior to 1986, yet only 5.3% of all houses in Smithers were reported to be in need of major repair (Statistics Canada 2007a). In 2010, the average cost of a single-family home in Smithers was \$188,588 (NDIT 2010e).

Smithers has its own transit system funded jointly by the Town of Smithers in partnership with the Village of Telkwa, the regional district, and BC Transit (SCSA 2008).

### 13.1.7 Terrace

Of the total number of private dwellings in Terrace in 2011 (4,861), 72.1% were owned, while the remainder were rented. Nearly 80% of dwellings were constructed prior to 1986, with 12.6% of total dwellings requiring major repair (Statistics Canada 2007b). The average monthly payment in 2006 for owned units was \$757, and the average value for single-family homes in 2011 was \$178,244 (Statistics Canada 2007b (NDIT 2010a).

In Terrace, the availability of rental accommodations decreased between April 2011 and April 2012, from 9.4 to 3.9% for private apartments and from 5.7 to 3.2% for townhouses. Average rents for townhouses and apartments in Terrace increased slightly between April 2011 and April 2012, from \$630 to \$645 per month, respectively (CMHC 2012).

Between 2001 and 2011, the total number of private dwellings in Terrace increased by 5.4%, despite the fact that the population of the city decreased in the same time period (Table 13.1-1; Statistics Canada 2012a).

## 13.2 EMERGENCY, HEALTH, AND SOCIAL SERVICES

### 13.2.1 Regional Study Area Overview

The delivery of emergency, health, and social services varies across the RSA and between LSA communities. Many services are provincial responsibilities that are delivered through ministry-specific, agency, or affiliate organization offices depending on the size and location of the community. Federal agencies, especially AANDC, tend to have a larger role, at least in funding if not delivery, of such services in First Nations reserve communities. Volunteers and non-government organizations play an increasingly important role in the delivery of many social and health services, especially in smaller communities. Such organizations will often receive some, but rarely all, of their operating and/or programming funding from provincial or federal ministries and it is not unusual for the demands on community volunteer capacity to be especially high in smaller communities (REF).

### 13.2.2 Dease Lake and Tahltan Nation Communities

#### Emergency Services

The RCMP detachment in Dease Lake is responsible for the largest service area in BC, stretching from Iskut to the Yukon border. This detachment is also responsible for local policing at Telegraph Creek and Iskut. Seven officers are employed by the detachment, including two stationed at Telegraph Creek. Tahltan community-policing positions have also been established (Rescan 2009).

Dease Lake has a volunteer fire department. Key services include fire suppression and extinguishment, investigation, auto fires, and community education and safety awareness programs. The department is staffed by approximately 12 to 15 volunteer firefighters, a 650 gallon pump truck, a 500 gallon water haul truck, portable pumps, and other equipment (Rescan 2009).



Ambulance service for all communities is provided by the BC Ambulance Service, out of the Stikine Health Centre in Dease Lake.

Telegraph Creek has a volunteer fire department, which is equipped with a new fire truck (which can pump water from the river) and vehicle extrication equipment. Fire services in Iskut are provided by the volunteer fire department out of Dease Lake.

### Health and Social Services

Iskut and Telegraph Creek are located in the Telegraph Creek LHA 94, while Dease Lake is a part of the Stikine LHA 87. First Nations residents are also covered under the federal First Nations, Inuit, and Aboriginal Health program, which provides direct health care (and/or funding) for on-reserve communities (REF).

The Stikine Health Centre in Dease Lake is the primary health centre for the region and services Hwy 37 from Bell II to the Yukon Border. Iskut and Telegraph Creek also have local health services providing primary care and rely on the Stikine Health Centre for more serious cases. Services focus on diagnostics and general treatment. Patients are transferred to larger centres when required, including Smithers, Terrace, Whitehorse, and Vancouver.

Iskut Valley Health Services (IVHS) is the first “stand-alone” First Nations nursing station in Canada, wherein the Iskut First Nation is responsible for all health and nursing services in the community. IVHS also provides first-response service for traffic accidents on Hwy 37, as needed. IVHS includes an emergency holding room, treatment room, and examination rooms. There are no beds for overnight treatment although it is open 24 hours. X-rays and various other hospital services are provided by the Stikine Health Centre in Dease Lake; patients may also be transported to Terrace, Smithers, Prince Rupert, or Vancouver.

Health services and programs in Telegraph Creek are provided and administered by the federal government through the Tahltan Health and Social Services Authority. The Telegraph Creek Nursing Station provides a community health nurse as well as community health programs, a National Native Alcohol and Drug Abuse Program (NNADAP), and home care support. Similarly, the Iskut Nursing Station provides a home care program, mental health workers, a NNADAP worker, patient travel, the safer sex harm reduction supply distribution program, and walk-in services (HealthLinkBC 2011).

Social services in Telegraph Creek are provided by the Tahltan Health and Social Services Authority, a non-profit organization that provides NNADAP services, mental health services, and shelter services for women involved in domestic violence. They also organize patient travel, provide victims services and access to home and community care, and provide the Ku We Gahan justice program and access to a crisis line (Province of BC 2011).

Both the Iskut and Tahltan bands also provide social and mental health services to their memberships. In Iskut, these are also coordinated through IVHS, while the Tahltan Health and Social Services Authority is responsible for programs and services targeted at members of the Tahltan Indian Band in Dease Lake and Telegraph Creek.

Recreation facilities in the Tahltan communities are limited. The Tahltan recreation hall at Telegraph Creek is used to host community meetings. At present, the community lacks the infrastructure and funding to offer sufficient recreational opportunities and programs, particularly for youth. The Iskut school gymnasium is the only recreation facility in Iskut and includes a new addition used as the community hall. A new arena is currently under construction. A new arena was also recently built at Dease Lake 9.

### 13.2.3 Stewart

#### Emergency Services

The service area for both the Stewart RCMP and fire departments covers approximately 44,000 km<sup>2</sup>. This includes all of Hwy 37A, plus Hwy 37 from Cranberry Junction to Bell II. The RCMP detachment employs three officers. The District of Stewart Volunteer Fire Department is well-equipped and has 12 volunteers who receive compensation for their participation in training and fire control.

A BC Ambulance Services detachment is also present in the community, serving Hwy 37A and Hwy 37, from Cranberry Junction to Bell II, including the camps at Bob Quinn and Eskay Creek and across the United States border in Hyder, Alaska. The needs for ambulance services have changed in recent years. Previously, most calls were for motor vehicle accidents, but currently transferring patients from Stewart to larger hospitals is more common.

#### Health and Social Services

The Stewart Health Centre provides clinic, emergency, and trauma services on an outpatient basis. Four physicians are on staff (NDIT 2010f). The health centre emergency room received 977 visits in 2009/2010; all patients requiring major medical care are transferred to Prince George (REF). Air ambulance and lab services are available at the Stewart Health Centre (Rural Coordination Centre of BC 2012). Prescriptions are ordered from Terrace as needed (Northern Health delivers the medications to the hospital). A public health nurse visits the community for one week each month. Mental health services are available through Stewart Mental Health and Addictions (Rural Coordination Centre of BC 2012).

The facility does not offer overnight services, except when needed during road closures. Several years ago the centre lost three inpatient beds (A. Danuser and S. McFee, pers. comm.). There are no seniors' services and no day care, although visiting nurses from Northern Health provide some services (A. Danuser and S. McFee, pers. comm.). While the amount of health services provided have decreased in the last several years, the current service capacity is adequate for the community's needs (S. Clark, pers. comm.).

The provision of social services is generally limited to community health and awareness programs offered by the health centre, RCMP, and other groups. Due to the small size of the community, detailed information regarding the types of services in the community was not available.

The recreation amenities in the Stewart area are numerous. There are several lakes and rivers in the area for fishing, boating, and water skiing. The Ripley Creek Inn provides 11 weeks of heli-skiing opportunities during the winter. Snowmobiling starts in November and can continue through to July; events are held by the Stewart Bordertown Snowmobile Club. Stewart has a variety of well-maintained hiking trails as well as access to the fifth largest glacier in North America (NDIT 2010f).

The Stewart Community Library is shared with the high school and has internet access. The Stewart Museum is only open during certain times of the year. The Town of Stewart also has a Winter Club and a Yacht Club. The Winter Club manages the arena and coordinates the use of related facilities (Stewart/Hyder International Chamber of Commerce n.d.).

### 13.2.4 Nisga'a Nation

#### Emergency Services

The Lisims/Nass Valley RCMP detachment, based in Gitlaxt'aamiks, provides services to the four Nisga'a villages. The detachment includes six RCMP officers as well as victims' assistance and public

services. Fire and Rescue for the Nisga'a villages is provided out of two community-run volunteer emergency fire departments located in Laxgalts'ap and Gitlaxt'aamiks. Ambulance services are provided by the BC Ambulance Service for the northern region, and the Nisga'a Valley Health Authority operates an emergency phone service (Rescan 2012a).

### Health and Social Services

The Nisga'a Valley Health Authority (NVHA) manages healthcare services and delivery in Nisga'a villages via the main centre in Gitlaxt'aamiks and satellite clinics. For more complex, long-term care the nearest full-service health facility is Mill Memorial Hospital in Terrace. The NVHA manages the delivery of physician services and public health, dental, and mental health services. There are six doctors on staff, typically three of whom are on duty at any one time. In addition, there are eight nurses responsible for a number of services ranging from community and public health to home care and treatment. Other local health services include X-ray provision, dental clinics, home support and residence care, cultural and community health, mental health and wellness (including alcohol and drug counselling, family therapy, and psychological services), and youth enrichment. The programs and services are accessed through one of three health centres: James Samuel Gosnell Health Centre in Gitlaxt'aamiks, wilp LuuLiMootkw (House of Healing) in Laxgalts'ap, and wilp Haldaawks (House of Medicine) in Gitwinksihlkw (NLG 2009; NNKN n.d.). There are no local services in Gingolx.

Nisga'a village governments each have a social services or development department intended to provide or manage a range of programs including basic and special needs, home care for seniors and/or disabled, training and education support, domestic violence prevention, and support services (NLG 2011; Rescan 2010). Nisga'a Child and Family Services (NCFS) has offices in Gitlaxt'aamiks, Terrace, and Prince Rupert. NCFS coordinates and provides services in compliance with the child welfare statutes as well as broader, non-statutory child and youth services delivered through community volunteers (NLG et al. 2009).

NCFS, which is funded by both the governments of Canada and BC, is in the process of obtaining child protection status (NLG 2012). NCFS, also provides resources for the following programs: family support services, youth worker program, community workshops, speech therapy, drug awareness resistance education, psychologist services, family support services, and a recreation program (NLG 2011).

Daycare and pre-school facilities in Nisga'a villages include the New Aiyansh Nursery School (HealthSpace 2012b), Ksi xyans Daycare Headstart in Laxgalts'ap (Healthspace 2012a), and Gingolx Headstart Daycare Centre (BC Ministry of Child and Family Development 2010).

Each of the Nisga'a villages has a recreation centre with a gymnasium and various activity rooms that house community based recreation programs organized and funded by NCFS (NLG 2009).

### Health and Social Programs

A number of youth programs operate within Nisga'a communities. These programs include the Nisga'a Youth Advisory Council, Youth Council, and the Youth Organizing Youth programs with the goals of providing leadership, capacity building, and development of Nisga'a youth between the ages of 15 and 29 (NNKN n.d.).

### 13.2.5 The Hazeltons and Skii km Lax Ha, Gitxsan Nation, and Gitanyow First Nation

#### Emergency Services

An RCMP detachment of 16 officers in New Hazelton serves the Hazeltons, and highway patrol is provided by the Terrace detachment. The RCMP serve a large geographic area and conduct road rescues (P. Weeber and B. Faasnidge, pers. comm.). Twenty-four hour 911 emergency response is available. Policing in Gitanyow is provided by the RCMP detachment in New Hazelton, located 67 km away.

New Hazelton has a volunteer fire protection force consisting of one chief and 20 volunteers. The force is well-equipped with updated technology (P. Weeber and B. Faasnidge, pers. comm.). Hazelton also has a volunteer fire department (A. Maitland and B. Smith, pers. comm.). Fire services for Gitanyow are provided by the six-member Gitanyow Volunteer Fire Department. The department is equipped with one large new fire truck and a smaller fire truck; it can respond to house fires as well as wildfires, albeit to a limited degree. Additional fire services are available from the Gitsegukla Fire Hall in Gitwangak.

An ambulance station in Hazelton provides 24-hour ambulance service. There has been an increase in training for emergency services in the Hazeltons in recent years (A. Maitland and B. Smith, pers. comm.). One ambulance crew is full-time and another is on standby (S. Robertson, pers. comm.).

Ambulance services are provided by BC Ambulance out of Wrinch Memorial Hospital in Hazelton. Additional ambulance services for the community are also available for residents of Gitwangak and Gitanyow from the BC Ambulance base located in Gitwangak (L. Martin, pers. comm.; S. Robertson, pers. comm.).

#### Health and Social Services

Wrinch Memorial Hospital is located in Hazelton. It is owned and operated by the United Church Health Services in conjunction with Northern Health (UCHS n.d.). It employs 160 full-time and casual employees in the hospital, clinic, pharmacy, and dental clinic. The hospital provides acute, complex, and palliative care, psychiatric services, obstetrics and paediatrics, and medical imaging. Optometrist services are available two days a month (P. Weeber and B. Faasnidge, pers. comm.). Patients typically travel to Terrace for more complex health matters or for services not available at Wrinch Memorial Hospital (S. Robertson, pers. comm.).

The hospital serves an area with a population of 7,000, stretching west to Gitanyow, east to Moricetown, and north through the Kispixox Valley. Hospital physicians also do outreach clinics in local First Nations communities (S. Robertson, pers. comm.). As the hospital does not have an intensive care unit, for serious cases patients must travel to Terrace or be airlifted to Vancouver after being stabilized. The hospital receives visiting specialists and has been a teaching hospital linked with the University of British Columbia for the past 60 years (REF).

Skeena Place, a senior's development located in Hazelton, provides affordable housing for seniors and those living with disabilities. These assisted living units are funded through the Independent Living BC program. It was developed by the Wrinch Memorial Foundation in partnership with the federal, provincial and local governments, and the Gitxsan Health Society (CMHC 2007b).

Lack of public transit in the community has an effect on access to health services. The hospital does, however, provide some outreach services to increase accessibility (S. Robertson, pers. comm.). Northern Health Connections offers transportation services to health centres outside of the Hazeltons once a physician refers a patient to another community (Northern Health 2008).

Northern Health's Mental Health and Addictions Services offers clinical services (assessment and treatment), life skills training, recreational therapy, perinatal depression support, supportive recovery, and a community response unit. The Hazelton Health Unit also provides community health services to residents, including HIV/AIDS education and support, immunizations, mother and infant care, nursing support services, pregnancy evaluation, and nutrition counselling (HealthLinkBC 2012).

There are four childcare or pre-school facilities and two "parent and child" services serving the Hazeltons. Other social services include speech pathology and pregnancy support and outreach (Northern Child Community Directory 2010). The Gitanyow Child Care Centre is owned by the Gitanyow Independent School Society and provides group child-care services (Health Space 2012).

The Gitxsan Child and Family Services Society serves the four Gitxsan communities of Glen Vowell, Kispiox, Gitwangak, and Gitsegukla, as well as Gitanyow. The society has four key areas of operations: social work (guardianship services, counselling, foster home recruiting and placement, and advocacy), family support worker programs, wilp-based programs, and planning and administration.

Other social programs are provided through GWES. The Gitanyow Band participates in the GWES and has a representative on the GWES Board. Specific programs and services provided by GWES include: a First Nations High School/Adult Learning Centre; Licensed Practice Nurse Program, Trades and Technology Bridging Program, Headstart, and various youth programs among others (REF).

Health services in Gitanyow are provided by the Gitanyow Health Centre, which is managed by Gitanyow Human Services (GHS). The community relies upon Wrinch Memorial Hospital in Hazelton for major services, including ambulance, doctor, dentist, and pharmacy services. GHS services include a visiting doctor once a week (provided by Wrinch Memorial Hospital), a dentist one morning per week, and a registered nurse at the health centre four days a week (L. Martin, pers. comm.).

Specific programs provided by GHS include NNADAP, Brighter Futures, Community Health Prevention and Promotion, Youth Solvent Abuse Reduction, Mental Health Services, Prenatal Nutrition, and HIV and AIDS Strategy.

Additional services organized through GHS include visiting physicians, medical transportation, and home care services, and participation in Aboriginal diabetes initiatives. Support from a community health nurse is provided for the community of Gitanyow (Gitanyow Human Services 2007).

The Hazeltons have a new fitness centre, a tennis court, a soccer field, a new skateboard park, a youth drop-in centre, a library, a baseball diamond, and a public park. However, community leaders are still concerned that there are insufficient recreation opportunities for children and young people (P. Weeber and B. Faasnidge, pers. comm.). Within the Hazelton area there are also four golf courses, five areas for camping and water sports, one ski resort, one publicly accessible lake (canoeing), two outdoor skating rinks, and one trail designated for cross country skiing (NDIT 2010f, 2010b).

Recreational facilities in the community of Gitanyow are limited to a ball diamond and soccer field adjacent to the Gitanyow Independent School, as well as a few playgrounds. There is a Gitanyow Community Centre located in Gitwangak.

### 13.2.6 Smithers

#### Emergency Services

Law enforcement in Smithers is provided by the Smithers RCMP detachment. The detachment has 15 general duty police, three staff in traffic services, one First Nations policing staff, and six support staff (A. Hunter, pers. comm.). The Town of Smithers and the RCMP have also partnered to establish the Smithers Community Police, who work to lower crime by improving social conditions and emphasizing the public's role in crime prevention and safety (Town of Smithers 2009).

The Smithers Volunteer Fire Department has 40 volunteer firefighters who train regularly. They report to a fire chief and deputy fire chief. Besides structural fire-fighting, services include first response care, highway rescues, aircraft fire fighting, fire prevention, public fire safety education, and volunteer fire fighting education. The department is equipped with eight vehicles (Town of Smithers 2009).

The BC Ambulance Service provides support for Smithers as well as surrounding communities from Houston to Hazelton. The service employs two full-time and more than 10 part-time paramedics, using three ambulances (Town of Smithers 2009).

#### Health and Social Services

Smithers and the surrounding area are serviced by the Bulkley Valley District Hospital, which is operated by Northern Health. The hospital provides a full range of services including emergency, medical, surgical, maternity, and palliative services. The hospital employs family physicians, anaesthetists, a paediatrician, visiting surgeons, and other specialists (Smithers Social Planning Council 2011a). There are 24 physicians, seven dentists, and three optometrists in Smithers (NDIT 2010e).

The Smithers Health Unit offers public health nursing services including family health, post-partum support, immunization clinics, school health, sexual health and communicable diseases services, amongst others (Smithers Social Planning Council 2011c).

The Meadows, a 14-unit supportive housing development located in Smithers, opened in 2007 and provides assisted living to seniors and people with disabilities. The units are self-contained, wheelchair-accessible apartments with a 24-hour response system. (CMHC 2007a).

The Bulkley Lodge is a long-term geriatric care facility administered through Home and Community Care. The facility has 14 designated mental health and addictions beds, and offers 24-hour staffing (Northern Health 2011a).

The Bulkley Valley Hospice Society staff and volunteers provide a Hospice/Palliative Program, a Bereavement Program, and equipment loans (Smithers Social Planning Council 2011a).

The Smithers Community Services Association has a volunteer centre and hosts a wide array of programs and services for Smithers residents (SCSA 2008).

Social services available in Smithers include programs for the treatment of drug and alcohol addictions, emergency housing and shelter, daycare, programs related to child protection, programs for learning (youth, literacy, seniors, and disabled individuals), family support programs, fetal alcohol spectrum disorder services, programs for seniors, risk reduction services, pregnancy outreach, and victims services (Smithers Social Planning Council 2011d).

In Smithers, Northern Health administers the Mental Health and Addictions Community Program. The program provides youth addictions counselling and referral, elderly services counselling, and treatment of eating disorders. The Bulkley Valley General Hospital offers a Methadone Program for individuals 19 years of age and over with drug dependency (Northern Health 2011a).

The Aboriginal Health Improvement Committee in Smithers is a venue for Aboriginal people to voice their health concerns and provide information about events or opportunities. Committee members include representatives from First Nations communities, Aboriginal organizations (i.e., Friendship Centres), Métis organizations, and local Northern Health leadership (Northern Health 2011a).

The Town of Smithers has two golf courses, four areas for camping and water sports, one RV park, and facilities for downhill and cross-country skiing (NDIT 2010e). The Bulkley Valley Regional Pool and Recreation Centre provides swimming and fitness facilities, as well as a gym, climbing wall, skating, and a curling club (Smithers Social Planning Council 2011b).

### 13.2.7 Terrace

#### Emergency Services

Police services in Terrace are provided by the Terrace RCMP, which had 60 personnel in 2010. The detachment area extends north on the Nass Road, 24 km south towards Kitimat, 70 km east towards Cedarvale, and 70 km west towards Prince Rupert (City of Terrace 2010b). The Terrace detachment provides 24-hour police services, forensic examination, drug cases, crime prevention and victims' services, crime reduction, and First Nations policing. The detachment handled over 12,000 complaints in 2007 (City of Terrace 2010b).

The City of Terrace fire department has a voluntary team of 25 individuals that respond to highway traffic accidents, medical emergencies, hazardous materials spills, and fires. The team offers in-house training programs and practice sessions as well as regional fire school courses. After three to four years of training, an individual will meet the professional qualification for basic fire-fighter, as set out by the Province of BC and the National Fire Protection Association (City of Terrace 2011b).

The BC Ambulance Service in Terrace is designated as an urban service. While there are no full time (24-hour) ambulances, the community has one daytime ambulance and two part-time call-out ambulances (Save our Paramedics 2010). BC Ambulance Services cooperates with the Terrace Fire Department in providing the First Responder Program (City of Terrace Fire Department 2010).

#### Health and Social Services

The primary health care facility in northwest BC is Mills Memorial Hospital in Terrace. Patients from Stewart, Dease Lake, Iskut, and Telegraph Creek with moderate to serious health issues are often transported to Mills Memorial Hospital in Terrace for further care. Mills Memorial Hospital is a teaching hospital with 52 beds and an outpatient clinic. There are also nine dentists on staff at the hospital (City of Terrace 2010a).

Terrace has the largest concentration of physicians and services north of Prince George. There are 16 family physicians and 21 specialists. Specialty physicians include: obstetrics/gynaecology, psychiatry, general surgery, urology, ophthalmology, otolaryngology, paediatrics, anaesthetics, radiology, nuclear medicine, pathology, and internal medicine (TEDA 2010).

The Terrace View Lodge is a long-term care facility that provides assisted living for seniors and an adult day program. The facility also offers a recreation program (Northern Health 2011b).

## SOCIO-ECONOMIC BASELINE REPORT

The Terrace and District Community Services Society (TDCSS) provides community living services, youth and family services (including the Big Brothers Big Sisters Program), employment services, and counselling and support services. The TDCSS is committed to the social, economic, and environmental well-being of all citizens of northwest BC and was established in 1970 as a resource board. It employs 150 people in the various programs that are offered (TDCSS 2012).

Recreation options are wide-ranging in the Terrace area. There are snowmobiling and hiking trails, as well as camping and fishing opportunities in the local wilderness. There are also two golf courses, the Terrace Aquatic Centre, the Shames Mountain ski hill, and the Sportsplex multi-purpose arena (City of Terrace 2010a).



## 14. Conclusions

## 14. Conclusions

---

The BC economy is historically based on natural resource extraction, although the relative importance of the primary sector has diminished as the provincial economy becomes more diversified and the population more urban. Nevertheless, in 2011 the goods sector, which includes key resource industries such as forestry and mining, still accounted for one in five jobs and almost a quarter of provincial GDP.

The northwest region of British Columbia is defined, on the one hand, by the experience and presence of Aboriginal peoples that have been living in the area for thousands of years. On the other hand, the region is characterized by a more recent pioneer experience in which natural resources such as fish, timber, and minerals have drawn waves of outsiders to the region in search of opportunity and lifestyle.

The RSA and LSA for the Project are removed from the coast (other than Nisga'a Nation and Stewart), hence fisheries do not feature as prominently in the overall economic history of the RSA as forestry and mining do. Fisheries, especially salmon, do however remain a central element of Aboriginal social, cultural, and economic life along the Stikine, Nass, Skeena, and other regional river systems.

Forestry was the economic mainstay of the region since the 1950s, but in recent decades its importance as the main driver of the regional economy has declined substantially. Mill closures have led to unemployment and subsequently the migration of workers and their families as they are forced to move elsewhere to find work. Nevertheless, forestry and related secondary industries do retain a presence in places such as Smithers and Terrace and forestry is still part of the social and economic fabric of the region.

Mining also has a long history in northwest BC, characterized perhaps most notably by “boom and bust” cycles that bring intermittent periods of mineral exploration, mine construction, and operations activity followed by economic contraction, job losses and, in some cases, the closure of entire communities.

While each community is unique in its own right, the communities that formally make up the LSA emerge from this long-standing dependence on and commitment to resource industries with a number of shared features.

First, many of the communities are relatively isolated from each other, with driving times sometime well over an hour to the next nearest settlement. Some communities are clustered together but are far from other communities. The region as a whole is well-removed from the metropolitan areas of the BC south coast. Isolation places some limits on community infrastructure and services as both distance and low population density tend to increase the cost of many goods and services that may be more expensive and/or less available than in larger and more densely populated areas. Regional “hubs” such as Smithers and Terrace (but also Prince Rupert and Prince George) thus have an especially important function within the RSA as centres where social, business, health, and other services, as well as a wide range of goods and supplies, are available to support the smaller, more remote communities in the region.

Second, the LSA communities generally have a narrow economic base with limited investment opportunities and, as noted, an historic dependence on extractive industries. For some communities, tourism provides some economic diversity that is not tied to the same economic cycles as mining or forestry. Nonetheless, since the mid-1990s many of these communities have experienced depopulation (13% on average across the RSA) and economic contraction as a result of the closure of timber processing facilities and of operating mines in the region, such as Kemess and Eskay Creek.

Third, it appears that some of these trends may be changing. The RSA has been the focus of significant investment in infrastructure projects, utilities, and mineral exploration over the last five years. Ongoing construction of the NTL project, as well as Long Lake and Forest Kerr Hydro projects, which will provide new access to power are anticipated to lead to additional investment and development in the region, particularly mining. Port expansion and plant modernization projects within and just outside of the RSA are also anticipated to produce long-term economic benefits for LSA communities, the region, and the province. This activity and investment is in part the reason behind why population numbers have stabilized in many LSA communities and the notable decrease in the unemployment rate, particularly among youth.

Fourth, with its historic dependence on resource sector opportunities and familiarity with seasonal and shift-based work, the regional population is potentially a valuable source of labour for the anticipated growth of mining activity in the region in the coming years. At the same time, there are demographic challenges linked to the aging population, especially among the non-Aboriginal population. The education and skill level of the regional population, especially in Aboriginal communities, is also a widely acknowledged barrier against LSA communities fully realizing the anticipated employment and other opportunities expected to stem from new developments and investment in the region. Many regional leaders recognize the importance of strategic planning and the need for a coordinated effort between local leaders, industry, and government to help ensure that investment in resource extraction also results in investment in local people and the regional economy (Brucejack Project Research Program 2012c).

Fifth, the physical infrastructure and housing stock across the LSA in a general sense can be characterized as adequate. A few of the more isolated communities continue to rely on diesel generators for electricity and household septic systems for sewage, but the majority of communities are connected to the grid and have satisfactory community sewage systems. Some communities have recently undergone substantial upgrades and retrofits to their sewage and or water systems. The communities are all connected to the BC Highway system with almost all roads paved and open year round, although winter driving conditions can be extremely challenging in places and regular snow ploughing is not always readily available except on major routes such as Hwy 16 and 37.

The most challenging area for local infrastructure, in general but also in the context of being able to absorb a potential influx of workers and their families in response to the labour demands of mining development, is housing. Housing stock faces the twin challenges of availability and the need for maintenance and repair. In the larger centres and municipalities the problem is manageable and in some cases due to the recent exodus of people due to the collapse of forestry there is even a surplus. But in the case of Aboriginal communities, both reserves and the Nisga'a villages, housing is an ongoing issue. Overcrowding is not uncommon, the need for repair and maintenance, widespread.

Finally, community access to and quality of social services from healthcare and education, to emergency services and social support varies from community to community. Dedicated volunteers and professionals deliver a wide range of social services across the region, but in some cases struggle to meet the high level of demand and social need.

The communities of the LSA include two regional centres with several thousand inhabitants, four smaller communities with several hundred inhabitants (only three of which are incorporated municipalities), four Treaty Nation Aboriginal communities, and nine First Nations reserve communities.<sup>34</sup> The Aboriginal communities range in size from fewer than 100 to over 700 inhabitants.

---

<sup>34</sup> As noted earlier in the document, for census purposes Statistics Canada counts Telegraph Creek 6, Telegraph Creek 6A, and Guhthe Tah 12 as separate communities; however, most people know them collectively as the Tahltan community of Telegraph Creek.

In total, there are about 5,000 people living in reserve communities or in the villages on Nisga'a Lands, roughly 99% who are of Aboriginal descent.

In addition, there are between 7,000 and 10,000 people who identify as Aboriginal in the RSA, but who do not live in a reserve or Treaty Nation community. These people choose instead to live in one of the other communities - municipalities and unincorporated towns or villages - that also comprise the LSA. At almost a third of the RSA population, Aboriginal residents are an important demographic that is both younger and growing faster than the population as a whole.

In addition to the economic involvement of Aboriginal peoples in resources and other industries, many First Nations and Treaty Nation members continue to pursue subsistence activities to supplement their household incomes and diets. These subsistence activities are pursued to varying degrees by different Aboriginal groups and individuals, but overall they continue to make an important contribution to household livelihoods, health, and cultural and social well-being of Aboriginal people and communities. In this regard subsistence activities do form part of the basis of the socio-economic baseline conditions of Aboriginal groups. For the purposes of the EA process in general and the Brucejack Gold Mine Project's Application for an Environmental Assessment Certificate and Environmental Impact Statement these elements are considered in the *Brucejack Gold Mine Project: Ethnographic Overview Report* and *Brucejack Gold Mine Project: Skii km Lax Ha Traditional Knowledge and Traditional Use Report* (Rescan 2013a, 2013b).

## References

## References

---

Definitions of the acronyms and abbreviations used in this reference list can be found in the Glossary and Abbreviations section.

1982. *Constitution Act*, Schedule B to the *Canada Act 1982* (UK). C. 11.
1985. *Indian Act*, RSC. C. I-5.
- 1996a. *Local Government Act*, RSBC. C. 323.
- 1996b. *Mineral Land Tax Act*, RSBC. C. 290.
- 1996c. *Mineral Tax Act*, RSBC. C. 191.
- 1996d. *Society Act*, RSBC. C. 433
2002. *Environmental Assessment Act*, SBC. C. 43.
2012. *Canadian Environmental Assessment Act, 2012*, SC. C. 19. s. 52.
- AANDC. 2010a. *Backgrounder - Update of the Community Well-Being (CWB) Index*. <http://www.aadnc-aandc.gc.ca/eng/1100100016582> (accessed July 2010).
- AANDC. 2010b. *Community Well-Being Index*. <http://www.aadnc-aandc.gc.ca/eng/1100100016643> (accessed July 2012).
- AANDC. 2010c. *Fact Sheet: The Nisga'a Treaty*. <http://www.aadnc-aandc.gc.ca/eng/1100100016428/1100100016429> (accessed August 2012).
- AANDC. 2010d. *First Nation Profiles*. <http://pse5-esd5.ainc-inac.gc.ca/fnp/Main/Index.aspx?lang=eng> (accessed December 2010).
- AANDC. 2011. *2011-2012 Report on Plans and Priorities: Demographic Description - Aboriginal Population Profile*. <http://www.aadnc-aandc.gc.ca/eng/1315424049095> (accessed July 2012).
- AANDC. 2012a. *First Nation Profiles*. <http://pse5-esd5.ainc-inac.gc.ca/fnp/Main/Index.aspx?lang=eng> (accessed July 2012).
- AANDC. 2012b. *Gitanyow - Registered Population*. [http://pse5-esd5.ainc-inac.gc.ca/FNP/Main/Search/FNRegPopulation.aspx?BAND\\_NUMBER=537&lang=eng](http://pse5-esd5.ainc-inac.gc.ca/FNP/Main/Search/FNRegPopulation.aspx?BAND_NUMBER=537&lang=eng) (accessed May 2012).
- AANDC. 2012c. *Gitanyow Governance*. [http://pse5-esd5.ainc-inac.gc.ca/fnp/Main/Search/FNGovernance.aspx?BAND\\_NUMBER=537&lang=eng](http://pse5-esd5.ainc-inac.gc.ca/fnp/Main/Search/FNGovernance.aspx?BAND_NUMBER=537&lang=eng) (accessed May 2012).
- AANDC. 2012d. *Registered Population*. [http://pse5-esd5.ainc-inac.gc.ca/fnp/Main/Search/FNRegPopulation.aspx?BAND\\_NUMBER=677&lang=eng](http://pse5-esd5.ainc-inac.gc.ca/fnp/Main/Search/FNRegPopulation.aspx?BAND_NUMBER=677&lang=eng) (accessed August 2012).
- Aboriginal Healing Foundation. 2007. *Suicide Among Aboriginal People in Canada*. Aboriginal Healing Foundation. <http://www.ahf.ca/downloads/suicide.pdf> (accessed August 2012).
- ATCO Group. 2011. *Our Partnerships*. <http://www.atcosl.com/en-ca/About-Us/Aboriginal-Relations/Our-Partnerships> (accessed June 2012).
- AuRico Gold Inc. 2012. *Kemess Underground*. <http://www.auricogold.com/exploration/kemess-underground.html> (accessed June 2012).

- BC Hydro. 2012a. *Northwest Transmission Line Project*.  
[http://www.bchydro.com/energy\\_in\\_bc/projects/ntl.html](http://www.bchydro.com/energy_in_bc/projects/ntl.html) (accessed June 2012).
- BC Hydro. 2012b. *Northwest Transmission Line Project: Nisga'a Nation & First Nations*  
[http://www.bchydro.com/energy\\_in\\_bc/projects/ntl/first\\_nations.html](http://www.bchydro.com/energy_in_bc/projects/ntl/first_nations.html) (accessed August 2012).
- BC ILMB. 2000. *Cassiar Iskut-Stikine Land and Resource Management Plan*. British Columbia Integrated Land Management Bureau. <http://ilmbwww.gov.bc.ca/slrp/lrmp/smithers/cassiar/index.html> (accessed April 2010).
- BC ILMB. 2004. *Dease-Liard Sustainable Resource Management Plan*.  
<http://ilmbwww.gov.bc.ca/slrp/srmp/north/dease-liard/index.html> (accessed April 2010).
- BC MARR. n.d. *Gitanyow First Nation*. <http://www.gov.bc.ca/arr/firstnation/gitanyow/default.html> (accessed September 2012).
- BC MCS. 2006. *Primer on Regional Districts in British Columbia*. Prepared by the Ministry of Community Services, Government of British Columbia.  
[http://www.cscd.gov.bc.ca/lgd/gov\\_structure/library/primer\\_on\\_regional\\_districts\\_in\\_bc.pdf](http://www.cscd.gov.bc.ca/lgd/gov_structure/library/primer_on_regional_districts_in_bc.pdf) (accessed March 2013).
- BC MEMNG. 2012a. *All Minerals Production and Values - 1998 to 2010*. (Includes British Columbia Mineral Production 2010 - 2012).  
<http://www.empr.gov.bc.ca/Mining/MineralStatistics/MineralEconomySnapshot/1992toPresent/ProductionandValues/Pages/default.aspx> (accessed June 2012).
- BC MEMNG. 2012b. *Mineral Exploration in British Columbia*.  
<http://www.empr.gov.bc.ca/Mining/Exploration/Pages/default.aspx> (accessed June 2012).
- BC MEMNG and BC MFLNRO. 2012. *British Columbia Mines and Mineral Exploration Overview 2011*.  
[http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/MineralExplorationReview/Documents/EX-OVERVIEW\\_IC2012-1.pdf](http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/MineralExplorationReview/Documents/EX-OVERVIEW_IC2012-1.pdf) (accessed June 2012).
- BC MEMPR. 2006. *Communities Benefiting from British Columbia Mineral Exploration in 2005*. British Columbia Ministry of Energy Mines and Petroleum Resources: N.p.
- BC MFLNRO. 2010. *The State of British Columbia's Forests, 2010*. BC Ministry of Forests, Lands and Natural Resource Operations. [http://www.for.gov.bc.ca/hfp/sof/2010/SOF\\_2010\\_Web.pdf](http://www.for.gov.bc.ca/hfp/sof/2010/SOF_2010_Web.pdf) (accessed May 2011).
- BC MFLNRO. 2011a. *Quarterly Update: B.C. Mill Status Report - Q4'2011: October to December 2011*. BC Ministry of Forests, Lands and Natural Resource Operations.  
<http://www.for.gov.bc.ca/ftp/het/external/!publish/web/mill-status/Mill-Status-Report-Q4-2011.pdf> (accessed August 2012).
- BC MFLNRO. 2011b. *Revised 2011/12-2013/14 Service Plan*. BC Ministry of Forests, Lands and Natural Resource Operations. [http://www.for.gov.bc.ca/hfd/pubs/docs/mr/plans/2011\\_12/flnr.pdf](http://www.for.gov.bc.ca/hfd/pubs/docs/mr/plans/2011_12/flnr.pdf) (accessed June 2012).
- BC MFLNRO. 2012. *2011 Economic State of the B.C. Forest Sector*. BC Ministry of Forests, Lands and Natural Resource Operations.  
<http://www.for.gov.bc.ca/ftp/het/external/!publish/web/economic-state/Economic-State-of-BC-Forest-Sector-2011.pdf> (accessed June 2012).
- BC Ministry of Child and Family Development. 2010. *Gingolx Village Celebrates New Child-Care Centre*.  
[http://www2.news.gov.bc.ca/news\\_releases\\_2009-2013/2010CFD0030-001585.htm](http://www2.news.gov.bc.ca/news_releases_2009-2013/2010CFD0030-001585.htm) (accessed July 2012).

- BC Ministry of Finance. 2012. *Mine Health and Safety Inspection Fee*.  
[http://www.rev.gov.bc.ca/business/Natural\\_Resources/Mine\\_Health\\_safety/mhsif.htm](http://www.rev.gov.bc.ca/business/Natural_Resources/Mine_Health_safety/mhsif.htm)  
 (accessed June 2012).
- BC MOE. 2012. *Public School Reports - Reporting K to 12*.  
[http://www.bced.gov.bc.ca/reporting/school\\_data\\_summary.php](http://www.bced.gov.bc.ca/reporting/school_data_summary.php) (accessed July 16, 2012).
- BC MOFML and MNRO. 2011. *British Columbia Mines and Mineral Exploration Overview 2010*.  
<http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/ExplorationinBC/Documents/2010/BCEX-Mining2010.pdf> (accessed September 2011).
- BC MOFR. 2006. *The state of British Columbia's Forests, 2006*. BC Ministry of Forests and Range.  
<http://www.for.gov.bc.ca/hfp/sof/2006/pdf/sof.pdf> (accessed April 2010).
- BC MOFR. 2007. *Mountain Pine Beetles in British Columbia*. BC Ministry of Forests and Range.  
[http://www.for.gov.bc.ca/hfp/mountain\\_pine\\_beetle/faq.htm#6](http://www.for.gov.bc.ca/hfp/mountain_pine_beetle/faq.htm#6) (accessed July 2008).
- BC MOFR. 2010. *Ministry of Forest and Range 2010/11 - 2012/13 Service Plan*. British Columbia Ministry of Forests and Range: n.p.
- BC MTCA. 2009. *Tourism Action Plan Update: Moving forward through 2010*.  
[http://www.tca.gov.bc.ca/tourism/docs/TAP\\_update\\_March\\_2009.pdf](http://www.tca.gov.bc.ca/tourism/docs/TAP_update_March_2009.pdf) (accessed April 2010).
- BC Salmon Farmers Association. 2010. *About Salmon Farming*. <http://www.salmonfarmers.org/about-salmon-farming> (accessed November 2010).
- BC Stats. 2006. *A Guide to the BC Economy and Labour Market*. BC Ministry of Advanced Education and Labour Market Development: n.p.
- BC Stats. 2007a. *2006 Census: Profiles (A) - Unincorporated Places (Designated Places) - Dease Lake*.  
<http://www.bcstats.gov.bc.ca/StatisticsBySubject/Census/2006Census/ProfilesA/UnincorporatedPlaces.aspx> (accessed May 2012).
- BC Stats. 2007b. *Community Facts: Smithers*. Government of British Columbia: n.p.
- BC Stats. 2007c. *Community Facts: Terrace*. Government of British Columbia: n.p.
- BC Stats. 2009a. *2006 Census Profile - Dease Lake, UNP*. Government of British Columbia: n.p.
- BC Stats. 2009b. *2006 Census Profile - Stewart, DM*. Government of British Columbia: n.p.
- BC Stats. 2009c. *2006 Census Profile - Stikine, CD*. Government of British Columbia:
- BC Stats. 2009d. *2006 Census Profile - Terrace, C*. Government of British Columbia: n.p.
- BC Stats. 2009e. *British Columbia Local Area Economic Dependencies - 2006: Table 2.3 2006 Diversity Indices*. [http://www.bcstats.gov.bc.ca/pubs/econ\\_dep/2006/2006\\_2.pdf](http://www.bcstats.gov.bc.ca/pubs/econ_dep/2006/2006_2.pdf) (accessed April 2010).
- BC Stats. 2009f. *Indicators of Crime, 2009*.  
[http://www.bcstats.gov.bc.ca/data/sep/i\\_lha/data/lcrim.pdf](http://www.bcstats.gov.bc.ca/data/sep/i_lha/data/lcrim.pdf) (accessed April 2010).
- BC Stats. 2009g. *Tourism Sector Grows, but at a Slower Pace in 2008*. Business Indicators, July 2009.  
<http://www.bcstats.gov.bc.ca/Publications/AnalyticalReports.aspx> (accessed April 2010).
- BC Stats. 2010a. *British Columbia Employment by Detailed Industry, Annual Averages*.  
<http://www.bcstats.gov.bc.ca/DATA/dd/handout/naicsann.pdf> (accessed April 2010).
- BC Stats. 2010b. *British Columbia Quarterly Population Estimates 1971-2009*. April 2010. Government of British Columbia. <http://www.bcstats.gov.bc.ca/data/pop/pop/BCQrtPop.asp> (accessed April 2010).



## SOCIO-ECONOMIC BASELINE REPORT

- BC Stats. 2010c. *Bulkley-Nechako Regional District*. BC Regional Index Online. [http://www.bcstats.gov.bc.ca/data/cen06/profiles/detailed/ch\\_cd.asp/](http://www.bcstats.gov.bc.ca/data/cen06/profiles/detailed/ch_cd.asp/) (accessed October 2010).
- BC Stats. 2011a. *College Region 12 - Northwest: Statistical Profile*. <http://www.bcstats.gov.bc.ca/statisticsbysubject/geography/referencemaps/CollegeRegions.aspx> (accessed August 2012).
- BC Stats. 2011b. *GDP at Basic Prices by Province/Territory, 2010 and 2011*. <http://www.bcstats.gov.bc.ca/StatisticsBySubject/Economy/EconomicAccounts.aspx> (accessed June 2012).
- BC Stats. 2011c. *Regional District 49 - Kitimat-Stikine. Statistical Profile*. <http://www.bcstats.gov.bc.ca/StatisticsBySubject/SocialStatistics/SocioEconomicProfilesIndices/Profiles.aspx> (accessed June 2013).
- BC Stats. 2011d. *Socio-Economic Profile: Local Health Area 92 - Nisga'a*. <http://www.bcstats.gov.bc.ca/StatisticsBySubject/SocialStatistics/SocioEconomicProfilesIndices/Profiles.aspx> (accessed July 2012).
- BC Stats. 2011e. *Tourism Sector Recovers in 2010*. <http://www.bcstats.gov.bc.ca/Publications/AnalyticalReports.aspx> (accessed June 2010).
- BC Stats. 2012a. *Business Counts and Employment by Industry*. <http://www.bcstats.gov.bc.ca/StatisticsBySubject/BusinessIndustry/BusinessCountsEmploymentByIndustry.aspx> (accessed June 2012).
- BC Stats. 2012b. *Employment, Unemployment and Related Rates*. <http://www.bcstats.gov.bc.ca/StatisticsBySubject/LabourIncome/EmploymentUnemployment.aspx> (accessed June 2012).
- BC Stats. 2012c. *Exports and Imports - Data*. <http://www.bcstats.gov.bc.ca/StatisticsBySubject/ExportsImports/Data.aspx> (accessed June 2012).
- BC Stats. 2012d. *Population Estimates*. <http://www.bcstats.gov.bc.ca/StatisticsBySubject/Demography/PopulationEstimates.aspx> (accessed May 2012).
- BC Stats. 2013. *Socio-Economic Profiles*. <http://www.bcstats.gov.bc.ca/StatisticsBySubject/SocialStatistics/SocioEconomicProfilesIndices/Profiles.aspx> (accessed March 2013).
- BC Stats and BC MAELMD. 2010. *A Guide to B.C. Economy and Labour Market (2010 edition)*. BC Stats and Ministry of Advance Education and Labour Market Development. <http://www.workbc.ca/Statistics/Regional-Profiles/Pages/Regional-Profiles.aspx> (accessed November 2012).
- BC Transit. 2009. *Hazelton's Regional Transit System*. <http://www.transitbc.com/regions/haz/> (accessed August 2010).
- BC Vital Statistics Agency. 2010. *Selected Vital Statistics and Health Status Indicators: One Hundred and Thirty-Ninth Annual Report 2010*. <http://www.vs.gov.bc.ca/stats/annual/2010/pdf/ann2010.pdf> (accessed July 2012).
- Bridges and Robinson. 2005. *Northwest BC Mining Projects: Socio Economic Impact Assessment*. Prepared for the Ministry of Small Business and Economic Development, Economic Analysis Branch by G.E. Bridges & Associates and Robinson Consulting & Associates.: N.p.

- Brucejack Project Research Program. 2012a. *Interviews in Smithers (June 18-22, 2012)*. Prepared by Rescan Environmental Services Ltd.: Vancouver, BC.
- Brucejack Project Research Program. 2012b. *Interviews in Terrace (June 18-22, 2012)*. Prepared by Rescan Environmental Services Ltd.: Vancouver, BC.
- Brucejack Project Research Program. 2012c. *Interviews in the Hazeltons (June 18 - 22, 2012)*. Prepared by Rescan Environmental Services Ltd.: Vancouver, BC.
- Brucejack Project Research Program. 2013. *Interviews in Vancouver (Feb. 4, 2013)*. Prepared by Rescan Environmental Services Ltd.: Vancouver, BC.
- CBC. 2007. *BC Community Pleads for Help to Halt Suicide "Epidemic"*.  
<http://www.cbc.ca/canada/british-columbia/story/2007/11/22/bc-hazeltonsuicides.html>  
 (accessed November 2008).
- CCSG Associates. 2004. *Overburdened: Understanding the Impacts of Mineral Extraction on Women's Health in Mining Communities*. Prepared for MiningWatch Canada by CCSG Associates: n.p.
- Chan, P. and K. D. Hancock. 2008. *Communities benefiting from British Columbia mineral exploration in 2007*. Ministry of Energy, Mines and Petroleum Resources, Province of British Columbia: Victoria, BC.  
<http://www.empr.gov.bc.ca/Mining/Geoscience/PublicationsCatalogue/OpenFiles/2008/Documents/OF2008-7.pdf> (accessed April 2010).
- City of Terrace. 2010a. *Invest Ready Community Profiles*. Terrace, BC.
- City of Terrace. 2010b. *RCMP Terrace - Organization Structure*.  
[http://www.terrace.ca/city\\_hall/departments/rcmp/](http://www.terrace.ca/city_hall/departments/rcmp/) (accessed July 2012).
- City of Terrace. 2011a. *City of Terrace: 2011 Annual Report*.  
[http://www.terrace.ca/documents/finance-taxation/2011\\_ANNUAL\\_REPORT.pdf](http://www.terrace.ca/documents/finance-taxation/2011_ANNUAL_REPORT.pdf) (accessed January 2013).
- City of Terrace. 2011b. *Volunteer Fire Department*. [http://www.terrace.ca/residents/faqs/faqs\\_-\\_volunteer\\_fire\\_dept/](http://www.terrace.ca/residents/faqs/faqs_-_volunteer_fire_dept/) (accessed July 2012).
- City of Terrace Fire Department. 2010.  
[http://www.terrace.ca/city\\_hall/departments/fire\\_department](http://www.terrace.ca/city_hall/departments/fire_department) (accessed May 2010).
- City of Terrace Forestry Task Force. 2009. *Final Report*.  
[http://www.terrace.ca/documents/reports/Final%20report%20-%20Forestry%20Task%20Force%20\\_2009\\_.pdf](http://www.terrace.ca/documents/reports/Final%20report%20-%20Forestry%20Task%20Force%20_2009_.pdf) (accessed June 2012).
- CMHC. 2007a. *\$4.3 Million Supportive Housing Development Open in Smithers*. <http://www.cmhc-schl.gc.ca/en/corp/nero/nere/2007/2007-06-22-1700.cfm> (accessed July 2012).
- CMHC. 2007b. *New Subsidized Assisted Living Units Open in Hazelton*.  
<http://www.cmhc.ca/en/corp/nero/nere/2007/2007-04-21-1700.cfm> (accessed July 2012).
- CMHC. 2012. *Rental Market Report: British Columbia Highlights Spring 2012*. [http://www.cmhc-schl.gc.ca/odpub/esub/64487/64487\\_2012\\_B01.pdf?lang=en](http://www.cmhc-schl.gc.ca/odpub/esub/64487/64487_2012_B01.pdf?lang=en) (accessed July 2012).
- Daum, H. 2010. *Cassiar - Do you remember?* <http://www.cassiar.ca/> (accessed November 2010).
- Dease Lake Community Website. n.d. *Dease Lake and Region Business Page*.  
<http://www.stikine.net/business.html> (accessed March 2013).
- DeaseLake.net. 2006. *Dease Lake Information*. <http://www.deaselake.net> (accessed November 2008).

- DHSS. 2004. *Nunavut Report of Comparable Health Indicators*. Prepared by S. Healey et al. for the Department of Health and Social Services, Government of Nunavut.  
<http://www.nunavuteconomicforum.ca/public/files/library/healthy/Nunavut%20Report%20on%20Comparable%20Health%20Indicators%20-%202004%20%28English%29.pdf> (accessed July 2011).
- District of Stewart. n.d. *Community Profile*. [http://www.districtofstewart.com/District/Stewart%20-%20Investment-Ready%20Community%20Profile%20\(web\).pdf](http://www.districtofstewart.com/District/Stewart%20-%20Investment-Ready%20Community%20Profile%20(web).pdf) (accessed October 2010).
- French, C. 2009. *Canada mining sector seen facing labor shortage*. Reuters Canada.  
<http://ca.reuters.com/article/domesticNews/idCATRE53D67220090414> (accessed June 2011).
- GDC. 2012. *Gitxsan Development Corp and Skii km Lax Ha Nation sign agreement*.  
<http://www.gitxsanbusiness.com/news-media/news/29-gitxsan-development-corp-and-skii-km-lax-ha-nation-sign-agreement.html> (accessed August 2012).
- GFA. 2010. *Gitanyow Fisheries Authority*. <http://www.gitanyowfisheries.com/> (accessed March 2011).
- GHCO. 2006. *Building a New Relationship: Recognition, Reconciliation, Respect & the Gitanyow Huwilp*. Gitanyow Hereditary Chiefs Office: n.p.
- GHCO. 2007. *The Gitanyow Ayookxw: The Constitution of the Gitanyow Huwilp*. Gitanyow Hereditary Chiefs Office: Gitanyow, BC.
- Gitanyow Human Services. 2007. *Gitanyow Human Services Annual Report 2006/2007*.  
<http://www.health.gitanyow.com/Files/2006-2007%20Gitanyow%20Annual%20Report.pdf> (accessed June 2011).
- Gitxsan Chiefs' Office. 2010. *Homepage*. [www.gitxsan.com](http://www.gitxsan.com) (accessed April 2010).
- Gitxsan Chiefs' Office. 2012. *News Release- Majority of Gitxsan Hereditary Chiefs Renew Mandate of GTS*. <http://www.gitxsan.com/news/324-news-release-majority-of-gitxsan-hereditary-chiefs-renew-mandate-of-gts.html> (accessed August 2012).
- Gitxsan Health Society. 2012. *Gitxsan Health Society Newsletter Volume 1, Issue 3. March 2012*.  
<http://www.gitxsanhealth.com/wp-content/uploads/2010/02/GHS-Newsletter-March-2012-issue2.pdf> (accessed July 6, 2012).
- GOABC. 2009. *The Guide Outfitting Industry in B.C.: Challenges and New Opportunities*.  
[http://residentpriority.ca/wp-content/uploads/2009/09/The-Guide-Outfitter-Industry-in-British-Columbia\\_Challenges-and-New-Opportunities.pdf](http://residentpriority.ca/wp-content/uploads/2009/09/The-Guide-Outfitter-Industry-in-British-Columbia_Challenges-and-New-Opportunities.pdf) (accessed June 2012).
- GOABC. n.d. *Economic Contribution*. <http://www.goabc.org/economic-contribution.aspx> (accessed August 2012).
- Government of BC. 2012. *Aboriginal Post-secondary Education and Training Policy Framework and Action Plan. 2020 Vision for the Future*.  
[http://www.aved.gov.bc.ca/aboriginal/docs/Aboriginal\\_Action\\_Plan.pdf](http://www.aved.gov.bc.ca/aboriginal/docs/Aboriginal_Action_Plan.pdf) (accessed June 2013).
- Government of British Columbia. 1981. *Local Services Act: Community Planning Area No. 28 Regulations*. BC Reg. 70/81. [http://www.qp.gov.bc.ca/statreg/reg/L/LocalServices/70\\_81.htm](http://www.qp.gov.bc.ca/statreg/reg/L/LocalServices/70_81.htm) (accessed October 2008).
- Hallin, L. 1999. *BC's Agriculture Industry--From Dairy Farming to Ginseng*.  
<http://www.bcstats.gov.bc.ca/Publications/AnalyticalReports.aspx?subject=agriculture> (accessed June 2012).
- Health Canada. 1999. *Canadian Handbook on Health Impact Assessment: Volume 1. The Basics*,.  
<http://publications.gc.ca/collections/Collection/H46-2-99-235E-1.pdf> (accessed June 2013).

- Health Space. 2012. *Gitanyow Child Care Centre*.  
[http://www.healthspace.ca/Clients/NHA/NHA\\_Website.nsf/CCFL-FacilityHistory?OpenView&RestrictToCategory=8F0C5243085AE6D288256DC8007FA28A](http://www.healthspace.ca/Clients/NHA/NHA_Website.nsf/CCFL-FacilityHistory?OpenView&RestrictToCategory=8F0C5243085AE6D288256DC8007FA28A) (accessed June 2012).
- HealthLinkBC. 2011. *Iskut Nursing Station*.  
<http://find.healthlinkbc.ca/search.aspx?d=LC054263&ds=SL068479> (accessed June 2012).
- HealthLinkBC. 2012. *Hazelton Health Unit*. <http://find.healthlinkbc.ca/search.aspx?d=LC000124&p=4> (accessed July 2012).
- Healthspace. 2012a. *Ksi xyans Daycare Head Start*.  
[http://www.healthspace.ca/Clients/NHA/NHA\\_Website.nsf/CCFL-FacilityHistory?OpenView&RestrictToCategory=118FFA9DCE1157D588256D50007C927C](http://www.healthspace.ca/Clients/NHA/NHA_Website.nsf/CCFL-FacilityHistory?OpenView&RestrictToCategory=118FFA9DCE1157D588256D50007C927C) (accessed July 2012).
- HealthSpace. 2012b. *New Aiyansh Nursery School*.  
[http://www.healthspace.ca/Clients/NHA/NHA\\_Website.nsf/CCFL-FacilityHistory?OpenView&RestrictToCategory=7655E7D96EDB98B588256D50007D4501](http://www.healthspace.ca/Clients/NHA/NHA_Website.nsf/CCFL-FacilityHistory?OpenView&RestrictToCategory=7655E7D96EDB98B588256D50007D4501) (accessed July 2012).
- Horne, G. 2009. *British Columbia Local Area Economic Dependencies: 2006*. BC Stats. March 2009. Government of British Columbia.: N.p.
- HRSDC. 2012. *Indicators of Well-Being in Canada, Canadians in Context - Aboriginal Population*.  
<http://www4.hrsdc.gc.ca/.3ndic.1t.4r@-eng.jsp?iid=36> (accessed June 2013).
- ICABC. 2009. *BC Check-up 2009 - Regional Check-Up*.  
<http://www.bccheckup.com/bccheckup.php?cat=80> (accessed August 2010).
- ICABC. 2013. *BC Check-Up 2013: North Coast Development Region*.  
<http://www.bccheckup.com/bccheckup.php?cat=86> (accessed May 2013).
- ICMM. 2010. *Good Practice Guidance on Health Impact Assessment*. [www.icmm.com/document/792](http://www.icmm.com/document/792) (accessed September 2013).
- IFC. 2012. *IFC Performance Standards on Environmental and Social Sustainability*. International Finance Corporation.  
[http://www1.ifc.org/wps/wcm/connect/topics\\_ext\\_content/ifc\\_external\\_corporate\\_site/ifc+sustainability/publications/publications\\_handbook\\_pps](http://www1.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+sustainability/publications/publications_handbook_pps) (accessed July 2012).
- Imperial Metals Corp. 2012. *Huckleberry Mine*.  
<http://www.imperialmetals.com/s/HuckleberryMine.asp> (accessed June 2012).
- Invest BC. 2010. *Terrace area*.  
<http://investbc.gov.bc.ca/CommunityProfiles/Pages/CommunityInfo.aspx?page=community&CommunityID=484> (accessed May 2010).
- Invest BC. n.d. *District of Stewart- Investment-Ready Community Profile*.  
[http://districtofstewart.com/District/Stewart%20-%20Investment-Ready%20Community%20Profile%20\(web\).pdf](http://districtofstewart.com/District/Stewart%20-%20Investment-Ready%20Community%20Profile%20(web).pdf) (accessed November 2012).
- IPGDC and NDIT. 2009. *Northern British Columbia: A Vision for Prosperity*. Prepared for Outlook 2020: Shaping BC's Economic Future. [http://www.bcbc.com/content/556/2020\\_200910\\_IPG.pdf](http://www.bcbc.com/content/556/2020_200910_IPG.pdf) (accessed June 2012).
- IVHS. 2006. *Iskut Valley Health Services Annual Report: 2005/06*. Iskut First Nation: n.p.

- Jepsen, D. 2005. *Mineral Exploration, Mining and Aboriginal Community Engagement: Guidebook*. British Columbia and Yukon Chamber of Mines: Vancouver, BC.
- K.T. Industrial Development Society. 2011. *Northwest BC Major Projects*. K.T. Industrial Development Society: Kitimat, BC.
- Kashaninia, Z. 2011. *Education and Health - An Analysis of Regions of British Columbia: Part 5: Northern Health*. Infoline Report. BC Stats: Victoria, BC.
- kto12.ca. 2012. *List of Schools Within British Columbia*. K to 12 Education by Numbers. [http://www.kto12.ca/School\\_list\\_all.html](http://www.kto12.ca/School_list_all.html) (accessed June 2012).
- MABC. 2012. *Mines Map*. <http://www.miningassociationbc.com/> (accessed June 2012).
- Marsden, T. 2010. *Gitanyow Wilp-based Socio-cultural Needs Assessment: Final Report*. Gitanyow Hereditary Chiefs Office: Gitanyow, BC.
- Morrell, M. 1989. The struggle to integrate traditional Indian systems and state management in the salmon fisheries of the Skeena River, British Columbia. In *Co-operative management of local fisheries*. Ed. E. Pinkerton. 231-48. Vancouver: UBC Press.
- Nathan Barton School. n.d. *Events: Road Opening*. [http://gingolx.ca/education/NBES/events\\_roadopening.html](http://gingolx.ca/education/NBES/events_roadopening.html) (accessed May 2012).
- NDIT. 2010a. *City of Terrace: Investment Ready Community Profile*. Terrace Economic Development Authority, City of Terrace, Invest BC and Northern Development Initiative Trust. [http://www.teda.ca/files/2113/2682/7307/Terrace\\_-\\_Investment-Ready\\_Community\\_Profile.pdf](http://www.teda.ca/files/2113/2682/7307/Terrace_-_Investment-Ready_Community_Profile.pdf) (accessed August 2012).
- NDIT. 2010b. *District of New Hazelton: Investment Ready Community Profile*. District of New Hazelton, Invest BC and Northern Development Initiative Trust. <http://investnorthwestbc.ca/site-selector-community-profiles> (accessed January 2013).
- NDIT. 2010c. *Northwest Region Investment Ready Community Profile*. <http://investnorthwestbc.ca/uploads/Northwest%20BC%20Region%20-%20Investment-Ready%20Community%20Profile.pdf> (accessed December 2012).
- NDIT. 2010d. *Regional District of Bulkley-Nechako: Investment Ready Community Profile*. Regional District of Bulkley-Nechako, Invest BC and Northern Development Initiative Trust. [http://www.rdbn.bc.ca/index.php?option=com\\_content&view=category&layout=blog&id=158&Itemid=6](http://www.rdbn.bc.ca/index.php?option=com_content&view=category&layout=blog&id=158&Itemid=6) (accessed December 2012).
- NDIT. 2010e. *Town of Smithers: Investment Ready Community Profile*. Town of Smithers, Invest BC and Northern Development Initiative Trust. <http://investnorthwestbc.ca/site-selector-community-profiles> (accessed January 2013).
- NDIT. 2010f. *Village of Hazelton: Investment Ready Community Profile*. Village of Hazelton, Invest BC, and Northern Development Initiative Trust. <http://investnorthwestbc.ca/site-selector-community-profiles> (accessed January 2013).
- NDIT. 2012. *Long Lake Hydro*. <http://investnorthwestbc.ca/major-projects-and-investment-opportunities/map-view/stewart/long-lake-hydro> (accessed August 2012).
- NLG. 2002. *Nisga'a Final Agreement: 2001 Annual Report*. <http://www.nisgaalisims.ca/files/nlg/u3/nfaap-eng.pdf> (accessed October 2012).
- NLG. 2009. *Nisga'a Final Agreement Implementation Report: 2008-2009*. <http://www.nisgaalisims.ca/files/nlg/u3/NLG-AR08-09SinglePages.pdf> (accessed October 2012).

- NLG. 2011. *Access to Justice*. <http://www.nisgaalisims.ca/access-justice> (accessed July 2012).
- NLG. 2012. *Nisga'a Lisims Government Special Assembly 2012*.  
[http://nnkn.ca/files/Special%20Assembly%202012\\_0.pdf](http://nnkn.ca/files/Special%20Assembly%202012_0.pdf) (accessed July 2012).
- NLG. n.d.-a. *About Nisga'a Lisims Government*. <http://www.nisgaalisims.ca/about-nisgaa-lisims-government> (accessed October 2012).
- NLG. n.d.-b. *Education*. <http://www.nisgaalisims.ca/education> (accessed June 2010).
- NLG. n.d.-c. *Nisga'a Commercial Group of Companies*. <http://www.nisgaalisims.ca/?q=nisgaa-commercial-group-companies> (accessed September 2012).
- NLG. N.d.-d. *Nisga'a Commercial Group of Companies*. <http://www.nisgaalisims.ca/?q=nisgaa-commercial-group-companies> (accessed June 2010).
- NLG, Province of BC, and Government of Canada. 1998. *Nisga'a Final Agreement*. Nisga'a Lisims Government, Province of British Columbia, and Government of Canada: New Aiyansh, BC.
- NLG, RDKS, NDIT, and Invest BC. 2010. *Nisga'a Nation and the Nass Region: Investment Ready Community Profile*. Nisga'a Lisims Government, Regional District of Kitimat-Stikine, Northern Development Initiative Trust, and Invest British Columbia: Terrace, BC.  
[http://www.nisgaalisims.ca/files/nlg/u3/Nass%20Region%20-%20Investment-Ready%20Community%20Profile%20\(web\).pdf](http://www.nisgaalisims.ca/files/nlg/u3/Nass%20Region%20-%20Investment-Ready%20Community%20Profile%20(web).pdf) (accessed July 2012).
- NNKN. 2012. *Nisga'a Women - Introduction to Mineral Resource Industry Opportunity*.  
<http://nnkn.ca/content/nisgaa-women-introduction-mineral-resource-industry-opportunity> (accessed July 2012).
- NNKN. n.d. *Nisga'a Valley Health Authority*. <http://www.nnkn.ca/NVHA> (accessed October 2012).
- North Coast Distance Education School. 2013. *Welcome to NCDES*. <http://ncdes.ca/Home> (accessed June 2013).
- Northern Child Community Directory. 2010. *Hazelton Community Directory*.  
<http://www.northernchild.ca/hazelton.htm> (accessed August 2010).
- Northern Health. 2008. *Northern Health connections*.  
[http://www2.northernhealth.ca/Your\\_Health/Programs/NH\\_Connections/default.asp](http://www2.northernhealth.ca/Your_Health/Programs/NH_Connections/default.asp) (accessed August 2010).
- Northern Health. 2011a. *Smithers*.  
<http://www.northernhealth.ca/YourHealth/MentalHealthAddictions/CommunityContacts/Northwest/Smithers.aspx> (accessed July 2012).
- Northern Health. 2011b. *Terraceview Lodge*.  
[http://www.northernhealth.ca/Portals/0/Your\\_Health/HCC/Residential%20Facilities/Terraceview%20Lodge%20Residential%20Care.pdf](http://www.northernhealth.ca/Portals/0/Your_Health/HCC/Residential%20Facilities/Terraceview%20Lodge%20Residential%20Care.pdf) (accessed July 2012).
- NWBC Forest Coalition. 2011. *Northwest BC Forest Coalition: Request for Expressions of Interest*.  
<http://www.nwbc-forestcoalition.org/index.htm> (accessed April 2011).
- NWCC. 2010a. *About Northwest Community College*. <http://www.nwcc.bc.ca/About/index.cfm> (accessed May 2010).
- NWCC. 2010b. *Welcome to the Smithers Campus*. <http://www.nwcc.bc.ca/Campuses/Smithers.cfm> (accessed July 2012).

- NWCC. 2012. *NWCC promotes First Nations and industry partnerships in Yukon*. NWCC press release. March 21, 2012. <http://sem.nwcc.bc.ca/News/ViewRelease.cfm?Story=350> (accessed July 2012).
- Oxfam. 2002. *Tunnel Visions: Women, Mining and Communities*. Victoria, Australia: Oxfam World Aid Abroad.
- Pacific BioEnergy. 2012. *Our Assets*. <http://www.pacificbioenergy.ca/assets01.html> (accessed June 2012).
- PDAC. 2009. *Excellence in Social Responsibility e-toolkit (ESR)*. Prospectors and Developers Association of Canada. <http://www.pdac.ca/docs/default-source/e3-plus---toolkits---social-responsibility/social-responsibility-in-exploration-toolkit-full-document.pdf?sfvrsn=4> (accessed September 2013).
- Pöyry FIC. 2010. *Eurocan Mill Viability Assessment, Summary Report*. Prepared for the Eurocan Viability Group by Pöyry FIC. <http://www.kitimat.ca/assets/Residents/PDFs/Eurocan%20Mill%20Viability%20Assessment,%20Summary%20Report.pdf> (accessed October 2010).
- PricewaterhouseCoopers. 2007. *The Mining Industry in British Columbia 2006*. PricewaterhouseCoopers LLP, Canada: n.p.
- PricewaterhouseCoopers. 2009. *Rock Solid: The Mining Industry in British Columbia 2008*. PricewaterhouseCoopers LLP, Canada: n.p.
- PricewaterhouseCoopers. 2011. *Seize the day: The mining industry in British Columbia 2010*. PricewaterhouseCoopers LLP: n.p.
- PricewaterhouseCoopers. 2012. *Forging Ahead: The Mining Industry in British Columbia 2011*. <http://www.pwc.com/ca/en/mining/publications/pwc-mining-survey-bc-2012-05-en.pdf> (accessed June 2012).
- Province of BC. 2011. *HealthLinkBC: Tahltan Health and Social Services Authority*. <http://find.healthlinkbc.ca/search.aspx?d=RG052899> (accessed May 2012).
- RDKS. 2012. *Board*. <http://www.rdks.bc.ca/content/board> (accessed May 2012).
- Regional Power. 2012. *Long Lake Hydro Project*. <http://www.regionalpower.com/projects/under-construction/long-lake> (accessed August 2012).
- Rescan. 2009. *Northwest Transmission Line Project: Socio-economic Baseline Study Report*. Prepared for the British Columbia Transmission Corporation by Rescan Environmental Services Ltd.: Vancouver, BC.
- Rescan. 2012a. *Kitsault Mine Project: Nisga'a Economic, Social, and Cultural Impacts Assessment Report*. Prepared for Avanti Mining Corp. by Rescan Environmental Services Ltd.: Vancouver, BC.
- Rescan. 2012b. *KSM Project: Nisga'a Social, Economic, Resource Use, and Cultural Survey Statistical Report*. Seabridge Gold Inc.: Vancouver, BC.
- Rescan. 2012c. *KSM Project: Nisga'a Business Survey Statistical Report*. Prepared for Seabridge Gold Inc. by Rescan Environmental Services Ltd.: Vancouver, BC.
- Rescan. 2013a. *Brucejack Gold Mine Project Ethnographic Overview Report*. Vancouver, BC.
- Rescan. 2013b. *Brucejack Gold Mine Project: Skii km Lax Ha Traditional Knowledge and Traditional Use Report*. Vancouver, BC.

- Rescan. 2013c. *KSM Project: 2012 Economic Baseline Report*. Prepared for Seabridge Gold Inc. by Rescan Environmental Services Ltd.: Vancouver, BC.
- Rescan. 2013d. *KSM Project: 2012 Social Baseline Report*. Prepared for Seabridge Gold Inc. by Rescan Environmental Services Ltd.: Vancouver, BC.
- Robinson Consulting and Associates Ltd; Timberline Forestry Inventory Consultants Ltd. 2006. *Kispiox Timber Supply Area: Timber Supply Review III - Socio-Economic Analysis*.  
[http://www.for.gov.bc.ca/hts/tsa/tsa12/tsr3/kispiox\\_SEA\\_v3.2.pdf](http://www.for.gov.bc.ca/hts/tsa/tsa12/tsr3/kispiox_SEA_v3.2.pdf) (accessed July 27, 2012).
- Rural Coordination Centre of BC. 2012. *Stewart Health Centre*.  
<http://www.rccbc.ca/Stewart/hospital-and-healthcare-centre-information> (accessed July 2012).
- Save our Paramedics. 2010. *Your Community's Ambulance Coverage*.  
<http://www.saveourparamedics.com/aboutus.php> (accessed May 2010).
- School District 54. 2010. *District Literacy Plan 2010-2011*.  
[http://www.sd54.bc.ca/images/stories/administration/DLP\\_2010-2011\\_FINAL.pdf](http://www.sd54.bc.ca/images/stories/administration/DLP_2010-2011_FINAL.pdf) (accessed July 2012).
- School District 92. n.d. *2002-2010. School District 92, Nisga'a: Schools*.  
[http://www.nisgaa.bc.ca/viewpage.php?page\\_id=5](http://www.nisgaa.bc.ca/viewpage.php?page_id=5) (accessed June 2010).
- SCSA. 2008. *Smithers Community Services Association: Programs, Transit Services*.  
<http://www.scsa.ca/programs/transit/transit-services/> (accessed May 2010).
- Simpson, D. and J. Simpson. 2006. *Community Consultations: Northern British Columbia*. Report prepared for Western Keltic Mines, Inc.: n.p.
- Skeena Fisheries Commission. n.d. *Gitanyow Fisheries Authority*.  
<http://www.skeenafisheries.ca/resources.htm#gitanyow> (accessed October 2010).
- Smithers Regional Airport. 2010. *Latest news*. <http://www.smithersairport.com/latestnews/html> (accessed April 2010).
- Smithers Social Planning Council. 2011a. *Bulkley Valley Hospice Society*.  
<http://www.smitherscommunitydirectory.com/directory/bv-hospice> (accessed July 2012).
- Smithers Social Planning Council. 2011b. *Bulkley Valley Pool and Recreational Centre*.  
<http://www.smitherscommunitydirectory.com/directory/bulkley-valley-regional-pool-and-recreation-centre> (accessed July 2012).
- Smithers Social Planning Council. 2011c. *Caring Companions - Northern Society for Domestic Peace*.  
<http://www.smitherscommunitydirectory.com/directory/caring-companions-northern-society-for-domestic-peace> (accessed July 2012).
- Smithers Social Planning Council. 2011d. *Smithers Community Directory*.  
<http://www.smitherscommunitydirectory.com/directory/www.moricetown.ca> (accessed July 2012).
- SNDS. 2005. *2003 Labour Market Census*. Skeena Native Development Society: N.p.
- SNDS. 2007. *2006 Labour Market Census*. <http://www.snds.bc.ca/lmc06.htm> (accessed June 2010).
- Statistics Canada. 1997. *1996 Community Profiles*.  
<http://www12.statcan.ca/english/Profil/PlaceSearchForm1.cfm> (accessed June 2010).
- Statistics Canada. 2002a. *2001 Aboriginal population profile*.  
<http://www12.statcan.ca/english/Profil01ab/PlaceSearchForm1.cfm> (accessed April 2010).



- Statistics Canada. 2002b. *2001 Aboriginal Population Profiles*.  
<http://www12.statcan.ca/english/Profil01ab/PlaceSearchForm1.cfm> (accessed April 2010).
- Statistics Canada. 2002c. *2001 Community Profiles*.  
<http://www12.statcan.ca/english/Profil01/CP01/Index.cfm?Lang=E> (accessed June 2010).
- Statistics Canada. 2002d. *Dease Lake Designated Place (2001)*. <http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/hlt/97-550/Index.cfm?TPL=P1C&Page=RETR&LANG=Eng&T=1302&SR=1&S=0&O=D&RPP=9999&PR=59&CMA=0> (accessed August 2012).
- Statistics Canada. 2007a. *2006 Aboriginal Population Profile*. <http://www12.statcan.ca/census-recensement/2006/dp-pd/prof/92-594/details/page.cfm?Lang=E&Geo1=BAND&Code1=59630463&Geo2=PR&Code2=59&Data=Count&SearchText=tahltan&SearchType=Begins&SearchPR=01&B1=All&Custom=> (accessed May 2012).
- Statistics Canada. 2007b. *2006 Community Profiles*. [http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/prof/92-591/search-recherche/frm\\_res.cfm?Lang=E&SearchType=Begins&SearchPR=01](http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/prof/92-591/search-recherche/frm_res.cfm?Lang=E&SearchType=Begins&SearchPR=01) (accessed May 2012).
- Statistics Canada. 2008. *2006 Census: Profile of Designated Places*.  
<http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/prof/rel/Rp-eng.cfm?LANG=E&APATH=3&DETAIL=0&DIM=0&FL=A&FREE=0&GC=0&GID=0&GK=0&GRP=1&PID=94540&PRID=0&PTYPE=89103&S=0&SHOWALL=0&SUB=0&Temporal=2006&THEME=81&VID=0&VNAMEE=&VNAMEF> (accessed July 2012).
- Statistics Canada. 2010. *Community Profiles. British Columbia*. <http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/prof/92-591/details/Page.cfm?Lang=E&Geo1=PR&Code1=59&Geo2=PR&Code2=01&Data=Count&SearchText=BritishColumbia&SearchType=Begins&SearchPR=01&B1=All&GeoLevel=PR&GeoCode=59> (accessed November 2012).
- Statistics Canada. 2012a. *2011 Census Profiles*. <http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/index.cfm?Lang=E> (accessed May 2012).
- Statistics Canada. 2012b. *Community Profile- East Moberly Lake 169 Indian Reserve*.  
<http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/details/page.cfm?Lang=E&Geo1=CSD&Code1=5955801&Geo2=CD&Code2=5955&Data=Count&SearchText=East%20Moberly&SearchType=Begins&SearchPR=01&B1=All&Custom=&TABID=1> (accessed July 2012).
- Stewart-Hyder ICC. 2008. *Stewart, BC & Hyder, AK International Chamber of Commerce*.  
<http://www.stewart-hyder.com> (accessed June 2008).
- Stewart World Port. 2012. *Project*. <http://www.stewartworldport.com/project> (accessed August 2012).
- Stewart/Hyder International Chamber of Commerce. n.d. *Community Services*. <http://www.stewart-hyder.com/community.html> (accessed July 2012).
- StewartBC.com. 2011. *Premier Mines*. <http://www.stewartbc.com/premier.htm> (accessed June 2012).
- Stikine RiverSong. 2012. *Our Company*. <http://stikineriversong.com/index.php/index> (accessed May 2012).
- Stroomey, C. 2010. *Special Focus: North Coast Development Region*. Tourism Sector Monitor, September 2010. BC Stats: Victoria, BC.  
<http://www.bcstats.gov.bc.ca/Publications/AnalyticalReports.aspx> (accessed January 2013).

- Tahltan First Nation and International Institute for Sustainable Development. 2004. *Out of Respect: The Tahltan, Mining, and the Seven Questions of Sustainability*. Tahltan Mining Symposium April 4-6, 2003. Dease Lake, BC: Prepared by the International Institute for Sustainable Development: Winnipeg, MB.
- TCC. 2006. *Decision Request (Draft). Socio-Cultural impacts Assessment for Development in Tahltan Territory*. Tahltan Central Council: n.p.
- TCC. 2010. *Who we are: History of the Tahltan Central Council*. <http://www.tahltan.org/s/WhoWeAre.asp> (accessed June 2012).
- TDCSS. 2012. *Terrace and District Community Services Society*. [http://tdcss.ca/nwads/about\\_us](http://tdcss.ca/nwads/about_us) (accessed July 2012).
- TEDA. 2010. *Terrace Economic Development Authority Homepage*. <http://www.teda.ca/> (accessed May 2010).
- TEDA. 2011. *Economic Profile*. <http://www.teda.ca/invest/stats-and-facts/economic-profile> (accessed August 2012).
- Terrace. n.d. *City of Terrace*. <http://www.terrace.ca/city/> (accessed November 2012).
- The First Nations Information Governance Centre. 2012. *First Nations Regional Health Survey (RHS) Phase 2 (2008/10) National Report on Adults, Youth and Children Living in First Nations Communities* The First Nations Information Governance Centre/Le Centre de la Gouvernance de L'information des Premeres Nations 2012: Ottawa, Ontario.
- The Vancouver Sun. 2012. *Aboriginal Students Graduating from Post-Secondary School in Record numbers: First Nations students are attending - and graduating from - post-secondary school and professional programs like law and medicine in record numbers*. <http://www.vancouversun.com/life/Aboriginal+students+graduating+from+post+secondary+schools+record+numbers/6938222/story.html#ixzz20oMiAKmH> (accessed July 17, 2012).
- TNDC. 2007. *Home Page*. <http://www.tndc.ca/> (accessed June 2012).
- Tourism BC. 2005. *Characteristics of the Commercial Nature-Based Tourism Industry in British Columbia*. <http://www.llbc.leg.bc.ca/public/PubDocs/bcdocs/374288/NatureBasedTourism.pdf> (accessed July 2008).
- Tourism BC. 2011. *The Value of Tourism in British Columbia - Trends from 1999 to 2009*. [http://www.jti.gov.bc.ca/research/IndustryPerformance/pdfs/Value\\_%20of\\_%20Tourism\\_%202011.sflb.pdf](http://www.jti.gov.bc.ca/research/IndustryPerformance/pdfs/Value_%20of_%20Tourism_%202011.sflb.pdf) (accessed June 2012).
- Town of Smithers. 2009. *Fire Department & Emergency Services*. <http://www.smithers.ca/index.php/municipal-hall/departments-services/fire-department-emergency-services/> (accessed July 2012).
- Town of Smithers. 2010a. *Official Community Plan*. [http://www.smithers.ca/uploads/town/pdfs-general/ocp-zoning/ocp-review-2008/Official\\_Community\\_Plan\\_Bylaw\\_No.\\_1614.pdf](http://www.smithers.ca/uploads/town/pdfs-general/ocp-zoning/ocp-review-2008/Official_Community_Plan_Bylaw_No._1614.pdf) (accessed August 2012).
- Town of Smithers. 2010b. *Town of Smithers Homepage*. <http://www.town.smithers.bc.ca> (accessed April 2010).
- Town of Smithers. 2011. *2011 Annual Report: Town of Smithers*. [http://www.smithers.ca/uploads/town/pdfs-general/publications-directories-newsletters/public\\_notices/2012/2011\\_Annual\\_Report.pdf](http://www.smithers.ca/uploads/town/pdfs-general/publications-directories-newsletters/public_notices/2012/2011_Annual_Report.pdf) (accessed January 2013).

- UCHS. n.d. *United Church Health Services*. <http://www.unitedchurchhealth.ca/index.php> (accessed November 2012).
- UNBC. 2010. *University of Northern British Columbia: Northwest Region*. <http://www.unbc.ca/regops/nw/> (accessed May 2010).
- Village of Gingolx. 2012. *Gingolx Village Government Administration*. <http://www.gingolx.ca/villagegov/villagegovt.html> (accessed May 2012).
- Village of Hazelton. 2008. *About*. <http://www.village.hazelton.bc.ca/html/about.htm> (accessed October 2008).
- West Fraser Timber Co. Ltd. 2009. *West Fraser to Permanently Close Eurocan Operation in Kitimat, BC*. <http://www.westfraser.com/news/docs/October%2028,%202009%20News%20Release%20Regarding%20Eurocan%20Closure.pdf> (accessed February 2010).
- West Fraser Timber Co. Ltd. 2012. *Our Mills*. <http://www.westfraser.com/profile/locations.asp> (accessed August 2012).
- White, J. P., D. Beavon, and N. Spence, eds. 2008. *Aboriginal Well-being: Canada's Continuing Challenge*. Toronto, ON: Thompson Educational Publishing Inc.
- World Bank. 2004. *Striking a Better Balance: the World Bank Group and Extractive Industries - A Final Report of the Extractive Industries Review*. World Bank Group: Washington, DC.

#### Personal Communications

- Clark, S. 2010. Stewart Health Centre. Personal Communication: May 26, 2010.
- Danuser, A. and S. McFee. 2009. Mayor, Stewart, BC. Interview by Andrew Robinson, Voice Recording: August 26, 2009.
- Derrick, A. 2010. Principal, Gitanyow Independent School, Gitanyow, BC. Interview by Andrew Robinson: May 26, 2010.
- Drew, E. 2009. Teacher, Bear Valley Elementary School., Stewart, BC. Interview by Andrew Robinson: August 27, 2009.
- Dykman, R. 2008. Chair, Terrace Economic Development Agency, Terrace, BC. Personal Communication.
- Greenwood, R. 2010. Superintendent, Coast Mountains School District 82, Terrace, BC. Interview by Andrew Robinson, Voice Recording: December 1, 2010.
- Harling, S. 2008. Former Executive Director, Terrace Economic Development Agency, Terrace, BC. Personal Communication.
- Hawkair. 2010. Customer Service Representative at Hawkair. Personal Communication: April 08, 2010.
- Hunter, A. 2010. Corporal, Smithers RCMP Detachment, Smithers, BC. Personal Communication: May 26, 2010.
- Kwiatowski, M. 2011. Director of Development Services, City of Terrace, Terrace, BC. Interview by Andrew Robinson: April 14, 2011
- Maitland, A. 2009. Director, Northwest Community College Hazelton Campus, Hazelton, BC. Interview by Andrew Robinson, Tape Recording: May 10, 2009..

- Maitland, A. 2012. Mayor, Village of Hazelton and Director, Northwest Community College Hazelton Campus, Hazelton, BC. Socio-economic baseline interview by Robin Sydneysmith, June 21, 2012.
- Maitland, A. and B. Smith. 2009. Mayor and Councillor, Hazelton, BC. Interview by Andrew Robinson: August 24, 2009.
- Malo, A. 2010. Executive Assistant to the Superintendent, Coast Mountains School District No. 82., Terrace, BC. Personal Communication: May 7, 2010.
- Martin, L. 2011. Housing Manager, Gitanyow Band Council. Personal Communication: April 13, 2011.
- Murray. 2010. Corporal, Royal Canadian Mounted Police, Stewart Detachment, Stewart, BC. Personal Communication: May 26, 2010.
- Richards, S. 2010. Secretary Treasurer, Bulkley Valley School District No. 54. Smither, BC. Personal Communication: May 10, 2010.
- Robertson, S. 2010. Chief Operations Officer, Wrinch Memorial Hospital, Hazelton, BC. Interview by Andrew Robinson, Voice Recording April 29, 2010.
- Simpson, D and Simpson G. 2013. Chief, Skii km Lax Ha (D. Simpson) and Founder/Project Manager with Tsetsaut Ventures Ltd. (G. Simpson). Socio-economic baseline interview by Robin Sydneysmith, February 13, 2012.
- Tarrant, M. 2013. Finance Officer, District of Stewart, Stewart, BC. Personal Communication: January 8, 2013.
- van Dyk, D. 2013. Chief Administrative Officer, District of New Hazelton, New Hazelton, BC. Personal Communication: January 8, 2013
- Webber, A. 2009. Manager of Planning and Economic Development for the Regional District of Kitimat-Stikine. Terrace, BC. Interview by Andrew Robinson, Tape Recording: August 28, 2009.
- Weeber, P. 2009. City of Terrace Fire Department, Terrace, BC. Personal Communication.
- Weeber, P. and B. Faasnidge. 2009. Mayor and Administrator, New Hazelton, BC. Interview by Andrew Robinson, Voice Recording: August 24, 2009.
- Wickie, V. 2010. Administrative Officer, Regional District of Kitimat-Stikine. Personal Communication: April 08, 2010.
- Wilcox, N. 2010. Mills Memorial Hospital, Terrace, BC. Personal Communication: May 6, 2010.
- Williams, B. 2010. Executive Assistant to the Superintendent, Bulkley Valley School District, Smithers, BC. Personal Communication: May 7, 2010.
- Williams, B. 2012. Band Manager, Kispiox Band. Kispiox, British Columbia. Personal Communication: June 20, 2012.