BLACKWATER GOLD PROJECT

APPLICATION FOR AN
ENVIRONMENTAL ASSESSMENT CERTIFICATE /
ENVIRONMENTAL IMPACT STATEMENT
ASSESSMENT OF POTENTIAL ECONOMIC EFFECTS



Appendix 6.1A Economic 2013 Baseline Report



Economic 2013 Baseline Report Appendix 6.1A











Blackwater Gold Project

Economic 2013 Baseline Report

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ACRONYMS

Abbreviations and Units of Measure	Definition
BC	British Columbia
BC MCSCD	British Columbia Ministry of Community, Sport and Cultural Development
BC MJTI	British Columbia Ministry of Jobs, Tourism, and Innovation
RDBN	Regional District of Bulkley-Nechako
CRD	Cariboo Regional District
DI	Diversity Index
RDFFG	Regional District of Fraser-Fort George
FVI	Forest Vulnerability Index
ha	hectare
HBC	Hudson's Bay Company
km	kilometre
LSA	Local Study Area
MPB	mountain pine beetle
m	metre
Mt	million tonnes
MW	megawatt
NHS	National Household Survey
%	percent
Project (the)	Proposed Blackwater Gold Project
RCMP	Royal Canadian Mounted Police
RDEA	Regional District Electoral Area
RSA	Regional Study Area
SC	Statistics Canada
SERSA	Socioeconomic Regional Study Area
t/d	tonnes per day
t/y	tonnes per year
US	United States



EXECUTIVE SUMMARY

The assessment of the baseline economic conditions examines conditions in a Socioeconomic Regional Study Area (SERSA) that consists of two areas: the Local Study Area (LSA) and the Regional Study Area (RSA). The populations in these areas have different employment, education, and income characteristics.

The LSA consists of those communities that are located nearest the proposed mine site and represent the closest directly accessible sources of labour, goods, and services required for project construction and operations. The LSA consists primarily of Regional District of Bulkley-Nechako Electoral Areas (RDEA) D and F, the Village of Fraser Lake, the District of Vanderhoof, and five populated Indian Reserves (Stony Creek 1, Laketown 3, Nautley (Fort Fraser) 1, Seaspunkut 4, and Stellaquo 1). The LSA also includes six other reserves (Kluskus 1, Tatelkus Lake 28, Sundayman's Meadow 3, Euchinico Creek 17, Trout Lake Alex 16, and Nazco 20) that are located near the mine site but inaccessible by road. As there is no published census information for these reserves, they have not been included in this baseline, but some socioeconomic baseline information for these reserves is provided in the Section 14 - Aboriginal Groups Background Information. Although the project will be located within Cariboo RDEA I, there will be no direct access from the mine to communities within the Cariboo region. Consequently, aside from information about regional district finances, no other economic information for Cariboo RDEA I is included in this baseline report.

According to the 2006 Census, 5,735 LSA residents were active in the labour force, representing 11% of the labour force in the SERSA. By 2011, this active workforce in the LSA consisted of 3,160 people, although this does not include residents of Bulkley-Nechako RDEAs D and F, for which data from the 2011 National Household Survey were not published due to low response rates. Directly comparing 2006 and 2011 data for those communities included in both surveys suggests that the overall labour force in the LSA increased by approximately 3%. The following description is based largely on those components of the LSA for which 2011 information is available. In 2011, 65.6% of adults were either working or looking for work, compared to 69.3% in 2006. In 2011, 11.9% of LSA residents were unemployed and this was higher than for the SERSA, where 10.3% of the workforce was unemployed. The majority of workers in the LSA (60.7%) had experience in non-basic (service) industries, particularly the "other services" industry (19.2%) and health care and social services industries (11.0%). The remaining 29.3% of the labour force had experience in basic industries, including agriculture and resource-based industries (14.9%) and manufacturing (18.2%). Approximately 85.0% of the workforce was employed full-time and worked 42.8 weeks per year. There were 923 registered businesses in the LSA in December 2012, with the majority of these (80%) located in Vanderhoof. Families in the LSA reported an average median income of \$68,896 in 2005, which was higher than the median family income in British Columbia (BC) (\$62,346) and lower than the estimated average median family income for the SERSA (\$70,988). Median incomes for individuals within the LSA (\$23,284) were lower than for BC (\$24,867) and the SERSA (\$25,371). Earnings accounted for 82.4% of total income and transfer payments from the government accounted



for approximately 11.1%. Approximately 11.9% of households in the LSA were considered low-income households, and this was lower than in the SERSA (13.7%) or for BC (17.3%). Adults in the LSA had relatively low levels of educational attainment, with 29.9% not having completed high school. Comparatively, 22.8% of adults in the SERSA and 16.7% of adults in BC had not completed high school.

The RSA is made up of the Fraser-Fort George RDEA C, Bulkley-Nechako RDEAs C and B, the City of Prince George, the Village of Burns Lake, the District of Fort St. James, and 12 Indian Reserves. According to the 2006 Census, 47,175 RSA residents were active in the labour force, representing 89% of the labour force in the SERSA. By 2011, the active labour force in the RSA had decreased to 46,455 residents, with most of the reduction occurring in Prince George. In 2011, 68.5% of adults were either working or looking for work and 10.2% were unemployed. The rate of unemployment in the RSA increased substantially since 2006, when it was 8.0% and above the provincial average of 7.8%. The vast majority of workers in the RSA (75.9%) had experience in non-basic (service) industries, particularly the "other services" industry (20.8%), business services (15.8%), and retail trade (12.4%). The other 24.1% of the labour force had experience in basic industries, especially manufacturing (9.3%). Approximately 79.6% of the workforce was employed full-time, and worked 43.6 weeks per year. There were 6,282 registered businesses in the RSA in December 2012, with 85% of these in Prince George. Families in the RSA reported an average median income of \$71,250 in 2005, which was higher than the median family income in BC (\$62,346) and the estimated average median family income for the SERSA (\$70,988). Median incomes for individuals within the RSA (\$25,622) were slightly higher than for BC (\$24,867) and the SERSA (\$25,371). Earnings accounted for 81.1% of total income and transfer payments from the government accounted for approximately 10.1%. Approximately 13.9% of households in the RSA were considered low-income households, and this was higher than in the SERSA (13.7%) and lower than for BC (17.3%). Within the SERSA, adults in the RSA had higher levels of educational attainment, with 22.3% not having completed high school as of 2011, compared to 22.8% of adults in the SERSA. These levels of attainment were lower than for BC, where 16.7% of adults had not completed high school.

The SERSA is situated in the North Coast & Nechako Development Region and the Cariboo Development Region. Since 2006, the unemployment rates in these two regions jumped noticeably in 2009, and then dropped in 2010 and 2011. During 2012, unemployment rates rose during the first part of the year and then dropped dramatically during late 2012 and early 2013 to near the provincial average. In the Cariboo Development Region, the unemployment rates have been below the provincial unemployment rate since November 2012. The average income in the SERSA increased 8% between 2005 and 2009.

At present, nine projects with a combined value of \$2,169 million were under construction in the SERSA and another five projects valued at \$613 million are on hold. A total of 15 projects valued at \$1,053 million have been proposed at locations within the SERSA.



1.0 INTRODUCTION

This report describes the baseline economic conditions in the area that will potentially be affected by the proposed Blackwater Gold Project (the Project). The baseline characterization focuses on key economic indicators related to the structure of the economy, employment, income, educational attainment, and municipal government finances. These indicators will be used to assess the potential effects of the Project on the local and regional economic environments.

The Project is located in the Central Interior of British Columbia (BC) in the Cariboo Regional District Electoral Area (RDEA) I of the Cariboo Regional District (CRD). It is situated approximately 110 kilometres (km) southwest of Vanderhoof, BC. The Project involves the development of mining facilities and support infrastructure located within the proposed mine site. A transmission line will also be constructed to provide the mine site with energy.

1.1 <u>Scope of Work</u>

The construction and operations of the Project may influence the economic characteristics of a number of local and regional communities, including neighbouring Aboriginal communities. To this end, economic baseline information was developed for potentially affected communities. The baseline economic conditions for these communities are assessed and described in this report.

1.2 Objectives

The objectives of this baseline report are to understand and document the economic conditions in the Project study area. Documentation of baseline indicators helps to assess and evaluate the potential effects on local economic conditions.

2.0 METHODS

2.1 Information Sources

This baseline report draws on information from a number of key sources. Most of the historical information related to the economic development in the region was obtained from websites for the various communities in the study areas. Information related to the current structure of the economy is based on recent information from BC Stats and Statistics Canada (SC) as well as published reports relating to the key industrial sectors and interviews with key informants in the communities. Some of the results of the 2011 National Household Survey (NHS), which replaced the long form census, were also used although, for some indicators, the 2006 census is the most comprehensive data source.



2.2 Methods for Data Collection and Data Analysis

Data were collected via desktop research and by conducting interviews with key informants. The quantitative data utilized in this section are from provincial and federal statistical sites (BC Stats and SC). The qualitative data were gathered through one-on-one meetings with Economic Development Officers in all of the urban communities in the study area.

2.3 Study Areas

The spatial boundaries for the assessment of economic effects are shown in **Figure 2.3-1**. The Socioeconomic Regional Study Area (SERSA) consists of the urban and rural communities most likely to be affected by the Project. These areas would most likely supply the labour force and goods and services required to construct and operate the mine. The boundary of the SERSA reflects the statistical reporting units used by SC and the Government of BC.

To identify effectively the extent of the potential social effects of the Project and to highlight the different economic and social vulnerabilities and capabilities of the rural and urban communities, the overall SERSA has been identified as having two components: a Local Study Area (LSA) and a Regional Study Area (RSA).

2.3.1 Local Study Area

The LSA includes census subdivisions (urban communities, rural populations, and Indian reserves) that are located nearest the proposed mine site and represent the closest directly-accessible sources of labour, goods, and services that would be required for Project construction and operation. These census subdivisions include:

- District Municipality of Vanderhoof;
- Village of Fraser Lake;
- Bulkley-Nechako RDEA D (Fraser Lake Rural);
- Bulkley-Nechako RDEA F(Vanderhoof Rural);
- Cariboo RDEA I (Quesnel Rural)
- Kluskus 1 reserve (Lhoosk'uz First Nation);
- Tatelkus Lake reserve (Lhoosk'uz First Nation);
- Sundayman's Meadow 3 reserve (Lhoosk'uz First Nation);
- Euchinico Creek 17 reserve (Nazko First Nation);
- Trout Lake Alex 16 (Nazko First Nation);
- Nazco 20 reserve (Nazko First Nation);
- Stony Creek 1 reserve (Saik'uz First Nation);
- Laketown 3 reserve (Saik'uz First Nation);
- Nautley (Fort Fraser) 1 reserve (Nadleh Whuten Nation);



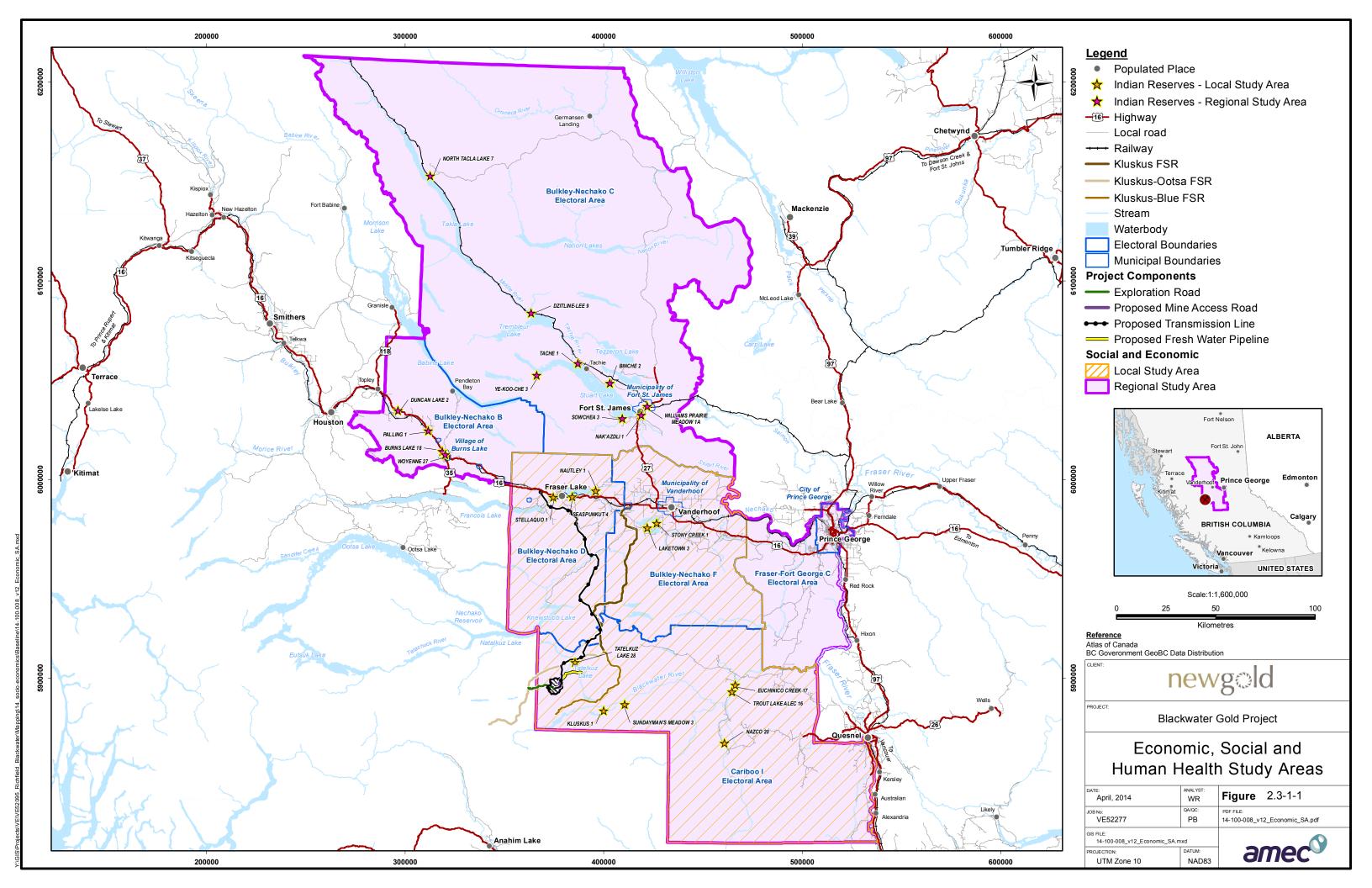
- Seaspunkut 4 reserve (Nadleh Whuten Nation); and
- Stellaguo 1 reserve (Stellat'en First Nation).

It should be noted that census data, aside from population counts, are not available for seven reserves (Kluskus 1, Tatelkus Lake 28, Sundayman's Meadow 3, Euchinico Creek 17, Trout Lake Alex 16, Nazco 20, Laketown 3, and Seaspunkut 4) due to their small size. SC withholds census data for small communities where data are not statistically valid and/or because of concerns about confidentiality. Thus, the economic baseline information presented in this report includes 2011 census data for 77 percent (%) of the on-reserve population in the LSA.

The Project would be situated in Cariboo RDEA I, close to the six reserves associated with the Lhoosk'uz First Nation and the Nazko First Nation, with no direct road access from the Project to these or other communities in Cariboo RDEA I. Consequently, economic information for the five reserves or Cariboo RDEA I has not been included in this baseline report, with the exception of municipal financial information for the CRD. Some socioeconomic baseline information for these two First Nations is provided in **Section 14**.¹

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¹ While other Aboriginal groups may have land and resources interests in areas that are situated within the SERSA, their home communities are outside the SERSA and have not been included in the assessment of economic effects. Background information for each First Nation potentially affected by the Project is presented in Section 14 (Aboriginal Groups Background Information).





2.3.2 Regional Study Area

The RSA includes populated census subdivisions (urban communities, rural populations, and Indian reserves) that are located east, north, and west of the LSA and represent the next closest sources of labour, goods, and services. These census subdivisions include:

- City of Prince George;
- District Municipality of Fort St. James;
- Village of Burns Lake;
- Bulkley-Nechako RDEA C (Fort St James Rural);
- Bulkley-Nechako RDEA B (Burns Lake Rural);
- Fraser-Fort George RDEA C (Chilako River-Nechako);
- Nak'azdli (Necoslie) 1 reserve (Nak'azdli Nation);
- Sowchea 3 reserve (Nak'azdli Nation);
- William Prairie Meadow 1A reserve, (Nak'azdli Nation);
- North Tacla Lake reserve (Takla Lake First Nation);
- Dzitline Lee 9 reserve (Tl'azt'en First Nation);
- Tache 1 reserve (Tl'azt'en First Nation);
- Binchie 2 (Pinchie 2) reserve (Tl'azt'en First Nation);
- Ye Koo Che 3 reserve (Yekooche Nation);
- Burns Lake 18 reserve (Burns Lake Nation);
- Woyenne 27 reserve (Lake Babine Nation);
- Duncan Lake 2 reserve (Wet'suwet'en First Nation); and
- Palling 1 reserve (Wet'suwet'en First Nation).

Due to the challenge of differentiating Project effects among individual reserves in the RSA, the census data for all reserves have been pooled. However, it should be noted that census data, aside from population counts, are only available for six reserves: Nak'azdli (Necoslie) 1, Tache 1, Binchie 2 (Pinchie 2), Burns Lake 18, Woyenne 27 and Palling 1. Thus, this economic baseline includes 2006 census data for 86% of the on-reserve population in the RSA in 2006.

2.3.3 Off-Reserve Aboriginal Population

A key feature of the 2006 census is that specific information was gathered on Aboriginal people living off-reserves in communities. For the LSA, 2006 census information for the off-reserve Aboriginal population was only available for Vanderhoof, which accounts for 35% of the off-reserve Aboriginal population in the LSA. In the RSA, 2006 census information for the off-reserve Aboriginal population was available for Prince George, Burns Lake and Bulkley-Nechako RDA C. In combination, these three census subdivisions account for 96%



of the off-reserve Aboriginal population in the RSA. In this assessment, the census information on the off-reserve population has been provided to differentiate the socioeconomic conditions of Aboriginal people living on and off reserves. There is no 2011 census or NHS information for the off-reserve Aboriginal population.

3.0 ECONOMIC BASE

3.1 Introduction

The potential economic effects of the Project on communities in the SERSA will ultimately depend on the capabilities and capacities of businesses to supply the goods and services needed for construction and operations of the Project. This section provides an overview of the broader regional economy, the historical pattern of its development, and the major economic development sectors that are currently driving it.

3.2 Information Sources and Methods

This section draws on information from a number of key sources. Most of the historical information related to the economic development in the region was obtained from websites for the various communities in the study areas. Information related to economic diversity, income dependency, economic activity, major employers, and major industries are based on information from the 2006 census, the 2011 NHS, published information from BC Stats (which is based on 2006 census information), and published reports related to key industrial sectors.

3.3 <u>Historical Overview</u>

Prior to the arrival of Europeans to what is now known as BC, it is estimated that as many as 300,000 Aboriginal people occupied BC (HelloBC, 2012). With the advent of Europeans drawn to the area's abundant wildlife, many Aboriginal people died after exposure to small pox (the virus had been carried by Europeans) and after their lands were occupied by settlers. By 1806, the Northwest Company established a major trading post named Fort St. James (First Peoples of Canada, 2013) and, in 1807, the trading post of Fort George (now known as the City of Price George) was established. Shortly afterwards, the Northwest Company amalgamated with the Hudson's Bay Company (HBC). The HBC divided present day BC into three fur-trading departments; the north-central portion of the province was known as the New Caledonia District and managed by the HBC from the capital of Fort St. James (GeoBC, 2013). By 1849, the entire lower mainland became known as New Caledonia. The discovery of gold in the Fraser River Canyon resulted in a gold rush in 1858 that brought an influx of Americans into a region that was largely unpopulated. This increase in population and the resulting demands for infrastructure led to a reorganization, a name change, and a new capital. In 1858, New Caledonia became the Colony of British Columbia with New Westminster serving as the original capital city (District of Prince George, 2012b).



With the changing economic needs of the 20th century, the north-central area of BC did not experience any notable population growth until 1914 when the last spike was driven in the second transcontinental rail line (Grand Trunk Pacific Railway). The rail line linked north-central BC through Prince George to Prince Rupert.. Soon after, the area along the rail corridor was established as the farming, mining, and forestry center of northern BC. Following World War II, the area flourished; lumber was in high demand as European cities rebuilt.

The City of Prince George grew rapidly and, in 1981, was the second largest city in BC (City of Prince George, 2012a). Prince George and the surrounding region were heavily reliant on the forestry sector but the outbreak of the mountain pine beetle (MPB) infestation in the early to mid 2000s forced the sector to diversify. Today, there are several pulp and paper plants, bio-energy facilities, and value-added wood production facilities in the areas. Prince George also participates extensively in the health care and educational industries. The District of Vanderhoof is reliant on the forestry sector and is also involved in agriculture; it is a service centre to approximately 5,000 rural residents (District of Vanderhoof, 2012). The District of Fort St. James, once the capital of the New Caledonia District, is dependent on resource-based industries and tourism (Fort St. James, 2012). Recently increased wood harvest allotments have resulted in the area booming. The Village of Fraser Lake participates in forestry and mining, and is located 25 km from the Endako Mine (Village of Fraser Lake, 2012). The Village of Burns Lake is largely resource-based and is home to the Regional District of Bulkley-Nechako (RDBN) head office (Village of Burns Lake, 2012).

3.4 <u>Economic Dependence and Diversity</u>

BC Stats uses a number of indicators to classify the structure and diversity of various local Economic Regions in BC. These local regions are smaller than regional districts and consist of one or more large urban communities and surrounding rural populations. The Burns Lake and Vanderhoof Economic Regions are located in the RDBN and the Prince George Economic Region is located in the CRD. The communities of Fraser Lake and Fort St. James are included in the Vanderhoof region.

One measure of economic diversity is income dependency, which estimates the extent to which specific industries directly and indirectly generate incomes for particular local economic regions (Horne, 2009). As **Table 3.4-1** indicates, in terms of dependency on income from various sources, all three local regions have been highly dependent on forestry, which accounts for 28% of income in the Prince George region, 37% in the Burns Lake region, and 42% in the Vanderhoof region. The public sector is also very important in all three local regions, and accounts for 28% of income in the Prince George region, 26% in Burns Lake, and 20% in Vanderhoof.



Table 3.4-1: Income Dependencies (%) of Local Economic Regions, 2006

Economic Activity	Prince George Region (%)	Burns Lake Region (%)	Vanderhoof Region (%)
Forestry	28	37	42
Mining and mineral processing	2	3	8
Fishing	0	0	0
Agriculture	1	3	3
Tourism	4	3	3
High technology	1	0	0
Public sector	28	26	20
Construction	7	3	3
Other employment income	7	2	1
Government transfers	12	14	12
Other non-employment income	10	9	7

Note: Income dependencies are based on after-tax income, 2006; % = percent

Source: Horne 2009

The second measure is regional economic diversity. BC Stats (Horne, 2009) calculates a Diversity Index (DI) for each region. The DI reflects the extent to which local regions are dependent on income from one or more sectors; DI scores range from zero (total dependence on a single sector) to 100 (equal dependence on all sectors). **Table 3.4-2** shows that the DI scores for two of the three local regions are similar; Burns Lake and Vanderhoof have a 2006 DI of 60 and 59 respectively, while Prince George has a higher DI of 66. This indicates that Prince George is more diverse than Burns Lake and Vanderhoof.

Table 3.4-2: Diversity Index and Forest Vulnerability Index for Local Economic Regions

Local Region	2006 Diversity Index	2006 Forest Vulnerability Index		
Prince George	66	46		
Burns Lake	60	73		
Vanderhoof	59	86		

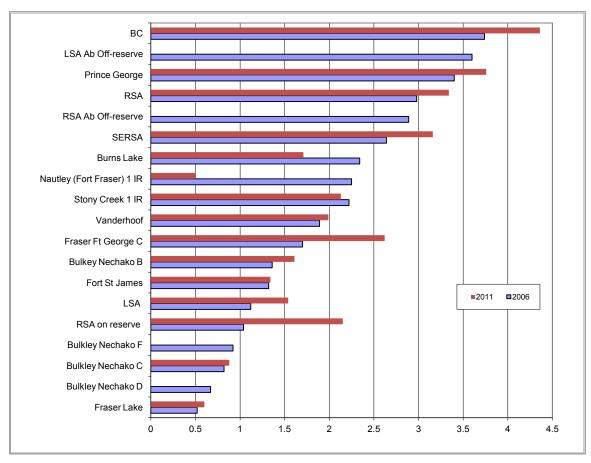
Source: Horne, 2009.

BC Stats also provides a Forest Vulnerability Index (FVI) that indicates the vulnerability of each local region to potential downturns in the forestry sector. Communities with a high dependence on income from the forestry sector and low economic diversity are considered to be the most vulnerable (FVI = 100). **Table 3.4-2** shows the FVI values for the three local economic regions. It also shows that all three regions may be vulnerable to a decline in the forest industry, with Vanderhoof being the most susceptible to changes in forestry.

A third measure of economic diversity is the ratio of workers in non-basic industries (including the retail and wholesale trade as well as business and other services industries) to the number of workers in basic industries, such as agriculture, forestry, mining,



manufacturing, and construction. Communities with a higher ratio of non-basic to basic employment are usually more diverse and offer a wide variety of services in support of new economic development. Communities with lower ratios tend to have less developed economies and a more limited ability to provide all the goods and services required to support new economic development. **Figure 3.4-1** shows that BC had a ratio of 3.74:1 non-basic jobs for every basic job in 2006 and that this ratio increased to 4.36:1 in 2011.



Note: BC = British Columbia

Source: SC 2007a; SC 2007b; SC 2013a

Figure 3.4-1: Non-basic/Basic Employment Ratios for Individual Communities in the SERSA, 2006 and 2011

The non-basic/basic employment ratios for the LSA and the RSA and for individual communities in the SERSA are also shown in **Figure 3.4-1**. It must be noted that, due to high non-response rates to the 2011 NHS, economic data are not available for Bulkley-Nechako RDEAs D and F. The data show that the rural communities and the smaller communities in the SERSA are the least diverse, with the lowest number of non-basic jobs per basic job. The larger urban community of Prince George has the highest number of non-basic jobs per basic job. Aboriginal people living off reserve in the LSA and the RSA also



had large numbers of non-basic jobs per basic job. The table also shows that, for the majority of communities, the non-basic/basic employment ratios were higher in 2011 than in 2006 indicating that, over time, there has been a decrease in basic employment in the SERSA and/or increased employment in non-basic industries. This regional trend is consistent with the overall BC trend. The only exceptions were in Burns Lake and the Nautley (Fort Fraser) 1 IR where the non-basic/basic employment ratios dropped.

3.5 <u>Major Employers</u>

Table 3.5-1 lists the largest employers in the region. It shows that the largest employers in the LSA are largely resource-based while the largest employers in Prince George, which falls in the RSA, are a combination of resource- and service-based companies.

The SERSA has traditionally had a natural resource development-based economy, heavily reliant on forest products, with some mining and agriculture. The forest products industry in the region has recently suffered from the MPB epidemic and decreased trade with the United States (US), although US housing stats are now recovering slowly. Most recently, an increased demand amongst Asian markets for BC timber and products has led to increased logging activity. The SERSA falls within the Nechako Development Region, which reports that, as a result of the closure of Kitimat's West Fraser Eurocan mill, there has been an increase in manufacturing activity as the businesses in the region attempt to fill the demand (Ragsdale pers. comm.). At the time of writing this report, an estimated 40 to 50 Fort St. James residents were working on the Mt. Milligan project, which is in the construction phase.

Table 3.5-1: Large Employers by Community

Community	Employer	No. of Employees
Burns Lake ⁽¹⁾	Regional District of Bulkley-Nechako	60
Fraser Lake	Endako Mine (Thompson Creek)	250
	West Fraser Timber	250
Fort St. James	Conifex Timber Inc.	130
	Apollo Forest Products	80
Vanderhoof	Canfor	250
	L&M Lumber Co.	200
	School District 91	200
Prince George	Northern Health	2,800
	Canfor (Pulp); Canfor (Wood)	2,600
	School District 57	2,100

Note: (1)Babine Forest Products (Hampton Affiliates) was the largest employer in this community until the fire in January 2012, which resulted in the loss of 300 direct jobs and numerous indirect jobs. Pending resolution of harvesting levels, it has been announced that the mill will be rebuilt

Source: Worthing pers. comm.; Carlson pers. comm.; Colombo pers. comm.; Clement pers. comm.; Oland pers. comm

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For information regarding large on-reserve employers, refer to the Aboriginal Chapter of this report.

3.6 Important Industries

3.6.1 Forestry

Forestry has been a prominent industry in the SERSA and surrounding areas. In 2006, the forest industry accounted for approximately 17% of employment in the urban centres in the SERSA and the rural portions of the Regional District of Fraser-Fort George (RDFFG) and RDBN (BC Stats, 2011c). Of the 10,775 people employed in logging and forest products, the majority (47%) resided in Prince George, 26% in the rural portions of the RDBN, and 15% in the rural portions of the RDFFG (**Table 3.6-1**).

The relative importance of employment in logging and forest products for individual areas within the SERSA is also shown in **Table 3.6-1**. The forest industry was a particularly important source of employment in Fort St. James and Fraser Lake, accounting for 40% to 38% respectively of total employment. Elsewhere in the SERSA, logging and forest products accounted for between 12% (Prince George) and 27% (Vanderhoof) of total employment.

Table 3.6-1: Regional Employment in Forest Industry, 2006

		Logging and Forest Products				
Population Segment	Total Employment Number	Number	Percent of Total (%)	Percent of Total Employment (%)		
Burns Lake	1,010	225	2	22		
Fraser Lake	600	230	2	38		
Fort St. James	760	305	3	40		
Vanderhoof	2,165	585	5	27		
Prince George	40,865	5,015	47	12		
RDBN (rural)	10,610	2,805	26	26		
RDFFG (rural)	8,910	1,610	15	18		
Total	64,920	10,775	100	17		

Note: % = percent; RDBN = Regional District of Bulkley-Nechako; RDFFG = Regional District of Fraser-Fort George. Statistics are not available for individual RDEAs so are reported for the total regional district

Source: BC Stats, 2011b

3.6.2 Agriculture, Food, and Beverage

The agriculture, food, and beverage industry is one of the smaller industries in the SERSA in terms of employment numbers, employing approximately 3% of the regional workforce in 2006 (**Table 3.6-2**). However, agriculture was credited for a being a stabilizing factor during the global recession of 2008/2009 in Vanderhoof and the surrounding RDEAs (Clement pers. comm.). As of 2006, 2,100 residents of the SERSA, including the rural populations of



the RDBN and RDFFG, were employed in this industry. The percentage of residents employed in the agriculture, food, and beverage industry ranged from 0% in major communities to 9% in the rural portion of the RDBN. Nearly half of the regional residents employed in this industry lived in the RDBN.

Table 3.6-2: Regional Employment in Agriculture, Food, and Beverage Industry, 2006

		Agriculture, Food, and Beverage Products				
Population Segment	Total Employment Number	Number	Percent of Total (%)	Percent of Total Employment (%)		
Burns Lake	1,010	0	0	0		
Fraser Lake	600	0	0	0		
Fort St. James	760	10	1	1		
Vanderhoof	2,165	0	0	0		
Prince George	40,865	280	14	1		
RDBN (rural)	10,610	930	47	9		
RDFFG (rural)	8,910	750	38	8		
Total	64,920	1,970	100	3		

Note: % = percent; RDBN = Regional District of Bulkley-Nechako; RDFFG = Regional District of Fraser-Fort George. Statistics are not available for individual RDEAs so are reported for the total regional district

Source: BC Stats, 2011b

According to the 2011 Census of Agriculture (SC, 2011), there were 606 farms in the SERSA in 2011, and half of these farms (305) were in Bulkley-Nechako RDEA F near Vanderhoof. These farms covered an area of 155,937 hectares (ha), and 40% of this land consisted of natural land used for pasture. Another 27% consisted of crop lands, 15% was tame or seeded pasture, 13% was woodlands and wetlands, and the balance (5%) was used for other agricultural purposes. One-quarter (25%) of farming operations consisted of cattle ranching and farming and 26% were farms raising other types of livestock. The other 49% of farms were producing various types of crops, primarily hay. There were 915 people involved in operating these farms (excluding paid labour) and gross revenues in 2010 were approximately \$39.8 million.

3.6.3 Mining and Mineral Products

The mining and mineral products industries accounted for approximately 2% of the employment in the SERSA and surrounding regions in 2006. At the time, the only mine in the area was the Endako Mine, located on Highway 16 between Burns Lake and Fraser Lake. **Table 3.6-3** shows that 50% of the regional labour force working in mining and mineral products lived in Prince George, while another 29% lived in the rural portions of the RDBN. Very few people living in most other urban communities worked in these industries. The exception was Fraser Lake where mining and mineral products industries accounted for 18% of total employment in 2006.



Table 3.6-3: Regional Employment in Mining and Mineral Products Industries, 2006

		М	ining and Mineral	Products
Population Segment	Total Employment Number	Number	Percent of Total (%)	Percent of Total Employment (%)
Burns Lake	1,010	20	1	2
Fraser Lake	600	110	8	18
Fort St. James	760	10	1	1
Vanderhoof	2,165	20	1	1
Prince George	40,865	685	50	2
RDBN (rural)	10,610	395	29	4
RDFFG (rural)	8,910	130	9	1
Total	64,920	1,3870	100	2

Note: % = percent; RDBN = Regional District of Bulkley-Nechako; RDFFG = Regional District of Fraser-Fort George. Statistics are not available for individual RDEAs so are reported for the total regional district

Source: BC Stats 2011b

The mining sector is emerging as a major source of employment in the region. For example, the 2009 approval of the Mount Milligan Mine located northeast of Fort St. James resulted in approximately 1,000 jobs during the construction phase of the mine and will employ 350 people during operation, which is scheduled to commence in 2014 (Thompson Creek Metals Company, 2012).

3.7 <u>Local and Regional Businesses</u>

As of December 2012, there were approximately 7,200 businesses in the SERSA (SC, 2013b). This represents the number of businesses that have employees, file corporate tax returns, are GST registrants, and/or have an income greater than \$0 (SC, 2013b). Information on the number of businesses on reserves is known to be incomplete.

Of the 7,200 businesses in the SERSA, 6,280 (87%) were located in the RSA and the other 920 (13%) were located in the LSA. **Table 3.7-1** shows the number of businesses by industry for the LSA, RSA, and SERSA. In the LSA, nearly one-third of all businesses (32%) were in the agriculture, forestry, fishing, and hunting industries, while such businesses accounted for only 9% of total businesses in the RSA. In contrast, 25% of businesses in the RSA provided various services to other businesses, compared to 18% of total businesses in the LSA. This is consistent with the observation that the economy of the LSA is heavily reliant on basic industries, while the RSA economy is more diversified and more reliant on non-basic service industries.



Table 3.7-1: Number of Regional Businesses by Industry, December 2012

	LSA		RSA		SE	RSA
Industry	No.	(%)	No.	(%)	No.	(%)
Agriculture, forestry, fishing, and hunting	297	32	547	9	844	12
Mining and oil and gas	1	0	34	1	35	0
Utilities	2	0	7	0	9	0
Construction	104	11	814	13	918	13
Manufacturing	31	3	198	3	229	3
Wholesale trade	20	2	233	4	253	4
Retail trade	72	8	570	9	642	9
Finance and real estate	76	8	896	14	972	13
Health care and social services	33	4	447	7	480	7
Education services	4	0	62	1	66	1
Business services	162	18	1540	25	1702	24
Other services	121	13	933	15	1054	15
Total	923	100	6281	100	7204	100

Note: LSA = Local Study Area; RSA = Regional Study Area; SERSA = Socioeconomic Regional Study Area;

No. = Number

Source: SC, 2013b

Information on the size of businesses, based on the number of employees, is available for 4,032 of the 7,204 businesses (56%) in the SERSA. **Table 3.7-2** summarizes the number of regional business according to various size categories.

Table 3.7-2: Number of Regional Businesses by Size (Number of Employees), December 2012

	L	LSA I		SA .	SERSA	
Number of Employees	No.	(%)	No.	(%)	No.	(%)
1 to 4	283	60	1762	50	2045	51
5 to 9	86	18	757	21	843	21
10 to19	48	10	519	15	567	14
20 to 49	40	8	353	10	393	10
50 to 99	7	1	98	3	105	3
100 to 199	5	1	41	1	46	1
200 to 499	3	1	22	1	25	1
500+	1	0	7	0	8	0
Total	473	100	3559	100	4032	100

Note: LSA = Local Study Area; RSA = Regional Study Area; SERSA = Socioeconomic Regional Study Area

Source: SC 2013b



Table 3.7-2 shows that businesses in the LSA tended to be smaller than in the RSA. In the LSA, 78% of businesses had less than 10 employees, compared to 71% of businesses in the RSA. The RSA had higher percentages of businesses with 10 employees or more, including seven businesses with more than 500 employees.

Interviews with representatives of the Chambers of Commerce for Vanderhoof and Fraser Lake confirmed high participation in the agriculture and forestry industries:

- The business community in Vanderhoof expects economic activity to continue to be driven by forestry and agriculture, but mining and oil and gas development will provide industrial supply businesses with opportunities for diversification. Increased activity in primary industries is expected to result in local and regional population growth that will lead to increased numbers of retail stores and restaurants. There are perceived to be no foreseeable limitations regarding business-related growth in the community (Siemens, 2013).
- Businesses in the Village of Fraser Lake are perceived to be operating near capacity, with the main economic drivers being the Endako Mine and West Fraser Timber, which are both constantly hiring community residents. This has left local businesses with a limited number of available workers. While the community has been strategically positioning itself to be able to grow and absorb some of the business and benefits associated with increased mining and oil and gas activity, growth in the retail and service sectors may be constrained by the limited workforce (Lytle, 2013).

Representatives of the Chambers of Commerce for communities in the RSA reported that the following communities are looking for opportunities for economic diversification and to reduce their reliance on forestry:

- In Prince George, the health and education industries are the largest employers and
 the number of small goods and services-related businesses is steadily increasing.
 While the current level of business activity can be supported by the existing labour
 force, the business community is anticipating a shortage of workers (Friesen, 2013).
 Consequently, the Chamber of Commerce is currently participating in an initiative to
 recruit landed immigrants with skilled trade experience into the community.
- Economic diversification is also occurring in Fort St. James. Although the community remains heavily reliant on forestry, construction of the nearby Mt. Milligan Mine will provide long-term employment opportunities in the mining industry and there has been a recent increase in the number of service-related businesses. Efforts have been made to revitalize the downtown core, including the remodelling and reopening of a lake-side hotel. It is reported that hotels and restaurants are busier than ever, largely as a result of increased mining exploration as the number of tourists appears to be lower than in previous years, and these businesses are having difficulty finding sufficient staff. It is expected that a barrier for new businesses will be the availability of commercially zoned land. The community is keen to tap into new industrial activity



- in the area and would prefer having workers permanently relocate to Fort St. James instead of residing elsewhere and flying in and out to work (Romeo, 2013).
- In Burns Lake, the need for economic diversification became apparent as a result of the 2012 fire that shut down the Babine saw mill. The mill fire served as "wakeup call" for the community. Since the fire, a number of small goods and services-related businesses have opened and some members of the workforce have changed careers or taken additional training/education in an attempt to diversify. Local businesses are trying to provide employment for those put out of work as a result of the fire. However, forestry continues to be the main industry driving the community's economy. It is reported that the business community remains optimistic and is pleased with the pace of business and hopes to benefit from the mining and oil and gas-related activity in the region (Wall, 2013). The main limitations to future growth are an aging labour force and the lack of a succession strategy for replacing these workers when they retire.

3.8 <u>Summary</u>

While the SERSA is heavily reliant on forestry and, to a lesser extent, agriculture, and mining, the service sector (non-basic employment) provides the majority of employment, with the public sector being an important employment source. The reliance on forestry as the key primary or basic industry has made communities vulnerable to the downturns in the forestry sector that have occurred in recent years. However, the economic base of the region is diversifying as a result of new mining related employment, especially with the Mt. Milligan Mine construction and pending operation.

4.0 LABOUR FORCE

4.1 <u>Introduction</u>

Construction and operations of the Project will create employment opportunities for residents of the SERSA. This section examines regional labour availability in terms of the overall size of the workforce, labour force participation, unemployment, and labour force experience.

4.2 Information Sources and Methods

This baseline report draws on information from the 2006 census (SC, 2007a and 2007b), as well as recent community and regional reports from government agencies, community profiles produced by municipalities, community and regional websites, and various economic and social profiles of communities and regions in central BC. It should be noted that census data are incomplete for some communities. Consequently, the reported information for the workforce may understate the size of the labour force, which can affect the accuracy of the rates of labour force participation and unemployment.



4.3 Labour Force

Table 4.3-1 lists employment characteristics for the SERSA based on the 2006 Census and the 2011 NHS. In 2006, the SERSA had a workforce of approximately 52,910 people. This represents the number of people who were working or actively seeking work. By 2011, the labour force in the SERSA, for those population segments for which comparative data are available, decreased by approximately 1%. In 2011, the SERSA accounted for 2.1% of the total labour force in BC.

In 2006, the LSA accounted for 11% of the labour force in the SERSA, and the RSA accounted for 89%. At that time, residents of Vanderhoof accounted for 38% of the LSA workforce, while residents of Bulkley-Nechako RDEA F accounted for another 31%. Comprehensive labour force data are not available for the LSA for 2011 because NHS information for Bulkley-Nechako RDEA D and F was withheld due to low response rates. However, for those population segments represented in both the 2006 and 2011 surveys, the labour force in the LSA increased by 3% between 2006 and 2011. Within the LSA, the largest increases in the labour force occurred in Vanderhoof and on the Stony Creek 1 IR, while decreases occurred in Fraser Lake and the Nautley (Fort Fraser) 1 IR.

Table 4.3-1 Labour Force Participation in the SERSA – 2006 and 2011

	Labou	ur Force in 2006	Labou	Change 2006 to 2011	
	Percent of SERSA				
Population Segment	Count	(%)	Count	(%)	(%)
LSA	5,735	11	3,160	6	+3 ⁽¹⁾
Vanderhoof	2,170	4	2,265	5	+4
Fraser Lake	600	1	585	1	-3
Bulkley-Nechako F	1,790	3	NA	NA	NA
Bulkley-Nechako D	870	2	NA	NA	NA
Stony Creek 1 IR	80	0	165	0	+106
Nautley (Fort Fraser) 1 IR	70	0	35	0	-50
Stellaquo (Stella) 1	75	0	110	0	+47
Off-reserve Aboriginal ⁽²⁾	120	0	NA	NA	NA
RSA	47,175	89	46,455	94	-2
Prince George	40,870	77	39,950	81	-2
Fort St. James	760	1	815	81	+7
Burns Lake	1,010	2	995	2	-1
Fraser-Fort George C	1,930	4	2,090	2	8
Bulkley-Nechako B	1,130	2	1,125	4	0
Bulkley-Nechako C	735	1	805	2	10
Reserves	635	1	600	2	-6
Off-reserve Aboriginal	4,165	8		NA	NA
SERSA (Total)	52,910	100	49,615	100	-1
BC	2,226,380		2,354,245		+6

Note: (1)Calculated based on 3,075 people in 2006 for those parts of the LSA for which both 2006 and 2011 data are available

BC = British Columbia; % = percent; RSA = Regional Study Area; LSA = Local Study Area;

SERSA = Socioeconomic Regional Study Area

Source: SC, 2007a; SC, 2007b; SC, 2013a

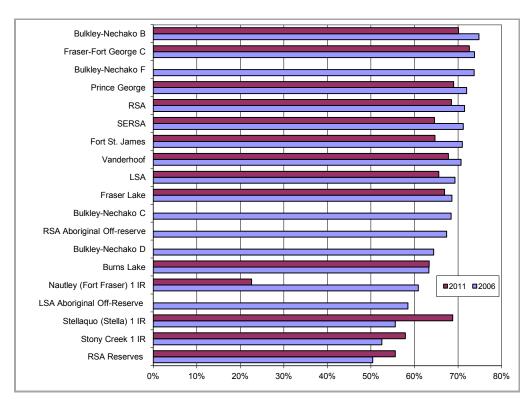


⁽²⁾Based on census data for 35% of the off-reserve Aboriginal population in the LSA Active workforce as of Census Day in 2006 and 2011



Within the RSA, Prince George accounted for 87% of the total labour force in both 2006 and 2011, with another 4% being residents of Fraser-Fort George RDEA C. Between 2006 and 2011, the labour force in the RSA declined by 2% with nearly all of this occurring in Prince George. However, there were slight increases in the labour force in Fort St. James and Fraser-Fort George RDEA C.

The size of the labour force is determined by two factors: the number of people aged 15 years and older (the adult population); and the labour force participation rate. The labour force participation rate represents the percentage of the adult population that was either working or actively seeking work. The labour force participation rates for the study area populations are presented in **Figure 4.3-1** for 2006 and 2011.



Note: LSA = Local Study Area; SERSA = Socioeconomic Regional Study Area; RSA = Regional Study Area **Source:** SC, 2007a; SC, 2007b; SC, 2013a

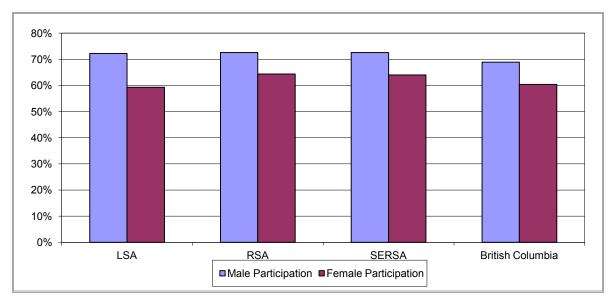
Figure 4.3-1: Labour Force Participation Rates for Residents of Study Area Communities, 2006 and 2011

As indicated in **Table 4.3-1**, the labour force participation rate was 69.3% in the LSA in 2006. The labour force participation rate in the RSA was 71.5% and for the total area (SERSA) was 71.2%. Participation rates in the study areas were above the BC average of 65.6% in 2006. The lowest labour force participation rates were reported for the on-reserve population in the LSA and RSA. By comparison, the participation rate of the off-reserve population in the RSA was similar to those of some communities in the RSA and LSA.



Since 2006, labour force participation rates in the SERSA have generally declined, partly due an aging population. While there has been a general decline in labour force participation for BC (from 65.6% in 2006 to 64.5% in 2011), the decrease has been much larger within the SERSA. Data for the LSA (excluding Bulkley-Nechako RDEA D and F) show the labour force participation rate declined from 71.6% in 2006 to 65.6% in 2011, although labour force participation rates increased for the Stony Creek 1 and Stellaquo (Stella) 1 IRs. Similarly, the labour force participation rate in the RSA dropped from 71.5% in 2006 to 68.5% in 2011. Decreased labour force participation was observed throughout the RSA with the exception of a small increase in labour force participation in Burns Lake and a large increase for the on-reserve Aboriginal labour force.

Figure 4.3-2 shows how labour force participation varied according to gender. As indicated, the rate of participation in the labour force was higher for males than for females in the SERSA as well as in the LSA and RSA.



Note: LSA = Local Study Area; SERSA = Socioeconomic Regional Study Area; RSA = Regional Study Area

Source: SC, 2013a

Figure 4.3-2: Labour Force Participation Rates by Gender in the SERSA, 2011

4.4 Unemployment

In 2006, there were 4,290 unemployed people in the SERSA. Of these, 12% lived in the LSA (515 people), while the balance (3,775 people or 88%) lived in the RSA (**Table 4.4-1**). Since 2006, there has been an increase in the number of unemployed people in the SERSA. Excluding information for Bulkley-Nechako RDEAs D and F, the total number of unemployed people increased from 4,055 to 5,135, which represents a 27% increase. Most of the increase in the number of unemployed workers occurred in Prince George where there were 835 more unemployed people in 2011 than in 2006. The highest rates of increase in the



number of unemployed occurred in Vanderhoof (55% increase), Fort St. James (50% increase), and Fraser-Fort George RDEA C (46% increase). Reduced numbers of unemployed people were found in Bulkley-Nechako RDEA B and Nautley (Fort Fraser) 1 IR.

Table 4.4-1: Number of Unemployed Workers and Unemployment Rates in the SERSA and BC, 2006 and 2011

	Unemploymen	t 2006	Unemploymen	t 2011	Change in No. Unemployed 2006 to 2011 (%)		
Population Segment	No. Unemployed	Rate (%)	No. Unemployed	Rate (%)			
LSA	515	9.0	375	11.9	+34 ⁽¹⁾		
Vanderhoof	145	6.7	225	9.9	+55		
Fraser Lake	40	6.7	45	7.7	+13		
Bulkley-Nechako F	125	7.0	NA	NA	NA		
Bulkley-Nechako D	110	12.6	NA	NA	NA		
Stony Creek 1 IR	65	40.6	80	48.5	+23		
Nautley (Fort Fraser) 1 IR	20	28.6	0	0	-100		
Stellaquo (Stella) 1	10	13.3	25	22.7	+150		
Off-reserve Aboriginal ⁽²⁾	25	20.8	NA	NA	NA		
RSA	3,775	8.0	4,760	10.2	+26		
Prince George	3,110	7.6	3,945	9.9	+27		
Fort St. James	60	7.9	90	11.0	+50		
Burns Lake	115	11.4	120	12.1	+4		
Fraser-Fort George C	140	7.3	205	9.8	46		
Bulkley-Nechako B	110	8.9	90	8.0	-18		
Bulkley-Nechako C	55	7.5	80	9.9	+45		
Reserves	185	29.1	230	34.1	+24		
Off-reserve Aboriginal	625	15.0	NA	NA			
SERSA (Total)	4,290	8.1	5,135	10.3	+27		
BC	133,615	6.0	182,775	7.8	+37		

Note: (1)Calculated based on 280 people in 2006 for those parts of the LSA for which both 2006 and 2011 data are available

BC = British Columbia; % = percent; RSA = Regional Study Area; SERSA = Socioeconomic Regional Study Area

Source: SC, 2007a; SC, 2007b; SC, 2013a

Residents of Prince George continue to represent the largest pool of unemployed people, accounting for 83% of unemployed people in the RSA and 77% of unemployed people in the SERSA. Within the LSA, the largest number of unemployed people was found in Vanderhoof although relatively large numbers of unemployed people were found on the Stony Creek 1 IR.

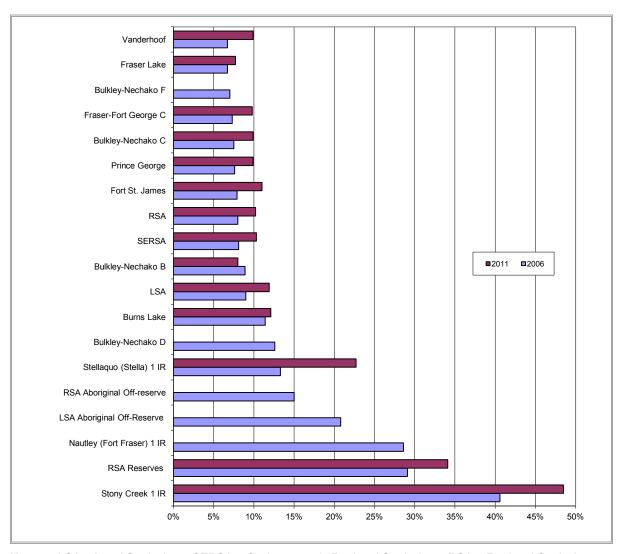
At the time of the 2006 census, the unemployment rate in the SERSA was 8.1%, which was higher than the provincial average (6.0%). Unemployment in the LSA was higher at 9.0%,

⁽²⁾Based on census data for 35% of the off-reserve Aboriginal population in the LSA



while the unemployment rate in the RSA was 8.0%. In 2011, the unemployment rate in the SERSA was 10.3%, which was also higher than the BC average (7.8%). The unemployment rate in the LSA (11.9%) was slightly higher than in the RSA (10.2%).

Variations in unemployment among individual communities within the SERSA are shown in **Figure 4.4-1**. Very high levels of unemployment (greater than 25%) occurred on the reserves in the LSA and RSA in both 2006 and 2011. In 2006, the unemployment rates for the off-reserve Aboriginal population were also high, but were less than 15% in the RSA.



Note: LSA = Local Study Area; SERSA = Socioeconomic Regional Study Area; RSA = Regional Study Area **Source:** SC, 2007a; SC, 2007b; SC, 2013a

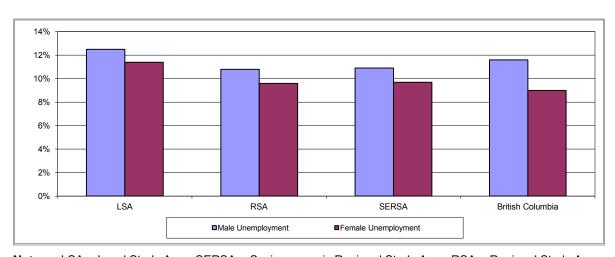
Figure 4.4-1: Unemployment Rates for Residents of Study Area Communities, 2006 and 2011

The lowest rate of unemployment was in Fraser Lake, with an unemployment rate of 7.7% in 2011. Other communities with relatively low unemployment rates include Bulkley-Nechako



RDEA B (8.0%), and Fraser-Fort George RDEA C (8.8%). Vanderhoof, Prince George, and Bulkley-Nechako RDEA C each reported unemployment rates of 9.9%. A comparison of unemployment rates between 2006 and 2011 shows that unemployment rates were higher in 2011 for most population segments. The only exceptions were Bulkley-Nechako RDEA C and Nautley (Fort Fraser) 1 IR, where unemployment rates declined.

Figure 4.4-2 shows how unemployment rates varied according to gender. For 2011, the rate of unemployment for males was higher than for females in the LSA, RSA, and SERSA. This pattern was consistent with the provincial rates of unemployment for males and females.



Note: LSA = Local Study Area; SERSA = Socioeconomic Regional Study Area; RSA = Regional Study Area

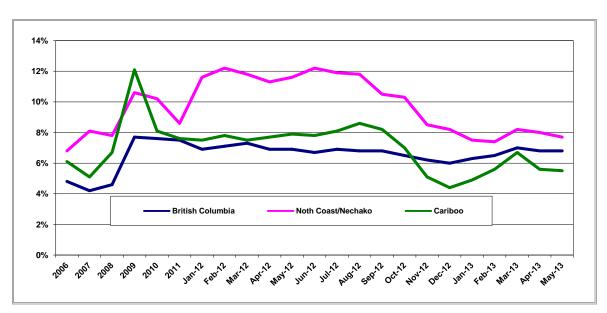
Source: SC, 2013a

Figure 4.4-2: Unemployment Rates by Gender in the SERSA, 2011

There have been some changes in the regional economy in recent years. The SERSA is situated in the North Coast & Nechako Development Region and the Cariboo Development Region. In 2006, the unemployment rate in the North Coast & Nechako Development Region was 6.8% and 6.1% in the Cariboo Development Region; these rates were higher than the provincial average of 4.8% (BC Stats, 2011b). Since 2006, unemployment rates in both regions and the province increased noticeably in 2009 (**Figure 4.4-3**). In the two development regions, unemployment rates decreased in 2010 and 2011. However, the rate of unemployment rose again in the North Coast & Nechako Development Region during early 2012, before dropping during late 2012 and early 2013 to near the provincial average. Some of this decline related to people leaving the region to find work elsewhere. Unemployment rates in the Cariboo Development Region remained relatively constant from 2010 to mid-2012; however, dropped rapidly during the last six months of 2012, such that the regional rates have actually been below the provincial unemployment rate since November 2012.

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Note: Monthly rates are three-month moving averages and are not seasonally adjusted

% = percent

Source: BC Stats, 2013

Figure 4.4-3: Annual and Monthly Unemployment Rates in the SERSA, 2006 - 2013

4.5 Labour Force Experience

4.5.1 Labour Force by Industry

Table 4.5-1 shows the labour force characteristics of the SERSA in terms of employment by industry for both 2006 and 2011. Within the SERSA, the largest industry of employment was the "other services" industry, which accounted for 20.7% of the labour force. The other services industry includes employment in: arts, entertainment and recreation industries; accommodation and food services industries; other service industries; and public administration. Other important industries for employment in the SERSA include business services (15.3%), retail trade (12.3%), and health care and social services (11.9%). This pattern does not differ much from the BC profile, although regional residents were more likely to be employed in manufacturing and agriculture and resource-based industries, but less likely to be employed in business services or finance and real estate.

Between 2006 and 2011, there were some changes in employment by industry within the SERSA. The most important change was the reduction in the percentage of the labour force with experience in agriculture and resource-based industries and manufacturing, likely due to the downsizing of the forest products industry throughout the SERSA. Between 2006 and 2011, there was an increase in the percentage of the labour force with experience in retail trade, health care and social services, and education services industries.



Table 4.5-1: Labour Force by Industry in the SERSA, 2006 and 2011

	LSA	· (%)	RSA (%)		SERS	A (%)	ВС	
Industry	2006	2011	2006	2011	2006	2011	2006	2011
Agriculture and resource-based	21.8	14.9	7.3	6.3	8.9	6.9	4.9	4.3
Construction	4.8	6.2	5.9	7.4	5.8	7.3	7.6	7.9
Manufacturing	20.3	18.2	11.9	9.3	12.8	9.9	8.6	6.5
Wholesale trade	1.1	0.5	4.2	3.6	3.9	3.4	4.2	3.9
Retail trade	8.5	10.3	11.0	12.4	10.8	12.3	11.4	11.6
Finance and real estate	3.0	3.4	4.0	4.2	3.9	4.1	6.2	6.4
Health care and social services	6.3	11.0	10.7	12.0	10.2	11.9	9.7	10.8
Education services	8.3	9.3	7.9	8.1	8.0	8.2	7.0	7.3
Business services	8.6	6.9	16.5	15.8	15.7	15.3	19.9	20.0
Other services	17.0	19.2	20.3	20.8	19.9	20.7	20.6	21.4

Note: BC = British Columbia; LSA = Local Study Area; % = percent; RSA = Regional Study Area;

SERSA = Socioeconomic Regional Study Area

Source: SC, 2007a; SC, 2007b; SC, 2013a

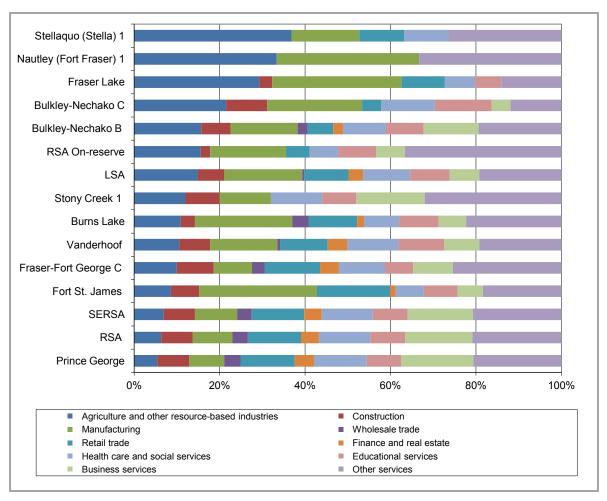
Labour force characteristics for residents of the LSA differed from the SERSA. For example, residents of the LSA had a higher percentage of employment in some basic industries (agriculture and resource-based industries and manufacturing). The LSA also had relatively low employment in wholesale trade, finance and real estate, and business services. This pattern is consistent with the low non-basic/basic employment ratio and lack of diversity in the LSA, as discussed above.

The overall distribution of the labour force by industry within the RSA was similar to that of the SERSA, and this reflects that the RSA accounted for the vast majority of the workforce (94%) in the SERSA.

Figure 4.5-1 provides information on labour force by industry in 2011 for individual communities within the SERSA. Communities with the highest levels of employment in basic industries (agriculture and other resource-based industries, construction and manufacturing) are shown at the top of the figure and communities with the highest employment in non-basic industries are shown below. Non-basic industries are those that are primarily service or retail-based.

The importance of Prince George as the regional services centre is evident, with 79% of the city's labour force being employed in the various service industries. Other communities within the SERSA that have high percentages of the labour force with experience in service-based industries include Fraser-Fort George RDEA C (72%), Stony Creek 1 IR (68%), and Vanderhoof (67%), which will act as a staging point for the Project. At the other extreme, some smaller communities have very small service sectors and are more heavily reliant on employment in the basic sectors. The manufacturing and agriculture and the resource-based industries are important for people living in Nautley (Fort Fraser) 1 IR (67% of total employment), Fraser Lake (63%), and Stellaquo (Stella) 1 IR and Bulkley-Nechako RDEA C (each at 53%).





Source: SC, 2013a

Figure 4.5-1: Labour Force by Industry for Residents of Individual Communities, 2011

4.5.2 Labour Force by Occupation

Table 4.5-2 describes the labour force according to the type of occupation. Two of the most common occupations in the SERSA were in sales and service occupations, and in trades, transport, and equipment operators. These two occupations together accounted for approximately 43% of employment in the SERSA, while business, finance, and administration accounted for another 15%. Residents of the LSA were more likely to be employed in occupations related to primary industry, processing, manufacturing and utilities, and trades, transport equipment operators, while residents of the RSA were more likely to be employed in occupations related to business, finance and administration, sales and service, and health.



Table 4.5-2: Labour Force by Occupation in the SERSA, 2006 and 2011

	LSA (%)		RSA (%)		SERSA (%)		BC (%)	
Occupation	2006	2011	2006	2011	2006	2011	2006	2011
Management	5.5	8.6	8.2	9.0	7.9	9.0	10.5	11.4
Business, finance and administration	10.4	12.5	16.5	14.6	15.8	14.5	17.1	16.0
Natural and applied sciences	3.3	4.1	5.5	5.0	5.2	5.0	6.3	6.7
Health	3.3	5.4	5.3	6.2	5.1	6.2	5.5	6.4
Social science, education, government service and religion	7.4	11.7	8.9	12.6	8.7	12.5	8.1	11.5
Art, culture, recreation, and sport	1.3	1.5	1.5	1.6	1.5	1.6	3.5	3.4
Sales and services	20.5	20.8	24.5	23.6	24.1	23.4	25.3	24.0
Trades, transport, and equipment operators	22.4	20.3	19.2	19.8	19.6	19.8	15.5	14.6
Primary industry	15.9	6.8	4.5	3.3	5.7	3.6	3.9	2.6
Processing, manufacturing, and utilities	9.8	8.3	5.9	4.3	6.3	4.6	4.2	3.2

Note: BC = British Columbia; LSA = Local Study Area; % = percent; RSA = Regional Study Area;

SERSA = Socioeconomic Regional Study Area. Due to the small population numbers, rounding errors

may have occurred

Source: SC, 2007a; SC, 2007b; SC, 2013a

Between 2006 and 2011, there were some changes in the occupations of SERSA residents. In 2011, there were smaller percentages of people employed in occupations related to: primary industry and processing; manufacturing and utilities; trades, transport and equipment operators; and business finance and administration. Higher percentages of people were employed in occupations in sales and service, management, and health.

The 2006 census provides more detailed information on the occupations and skills of construction workers and this information is provided in **Table 4.5-3**. Of the 2,990 workers in the construction industry in 2006, 2,320 (78%) had occupations in the trades or as transportation and equipment operators or in related occupations. Workers in the construction trades accounted for 36% of these occupations, while helpers and labourers accounted for another 18%. Residents of the LSA accounted for 10% of the workers in the SERSA who had occupations in the trades or as transportation and equipment operators or in related occupations.

Since 2006, the number of SERSA residents with experience in the construction industry has increased substantially. According to the NHS (SC, 2013), there were 3,515 people with experience in the construction industry in 2011 and this number excludes residents of Bulkley-Nechako RDEAs D and F for which no information was available. This represents an increase of 1,195 workers (51% increase) since 2006, with much of the increase occurring in the RSA.



Table 4.5-3: Occupations in the Construction Industry, 2006

Occupation	LSA	RSA	SERSA
Construction Industry Labour Force	260	2,730	2,990
Trades, Transport, and Equipment Operators and Related Occupations	230	2,090	2,320
Contractors and supervisors in trades and transportation	20	130	150
Construction trades	65	775	840
Stationary engineers, power station operators and electrical trades and telecommunications occupations	10	240	250
Machinists, metal forming, shaping and erecting occupations	10	185	195
Mechanics	0	70	70
Other trades not elsewhere classified (n.e.c.)	0	50	50
Heavy equipment and crane operators, including drillers	65	160	225
Transportation equipment operators and related workers, excluding labourers	10	90	100
Trades helpers, construction, and transportation labourers and related occupations	50	370	420

Note: LSA = Local Study Area; RSA = Regional Study Area; SERSA = Socioeconomic Regional Study Area;

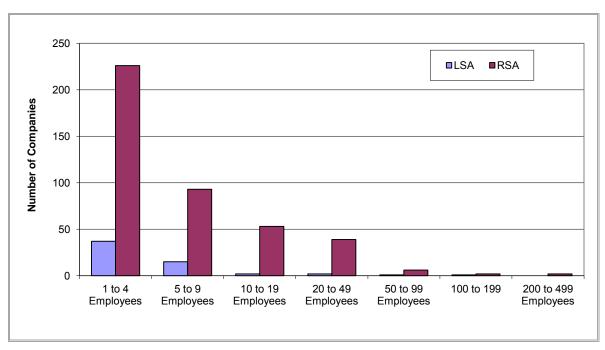
 ${\sf n.e.c}$ = not elsewhere classified. Due to the small population numbers rounding errors may have

occurred **Source**: SC, 2008

As of December 2012, there were a reported 918 construction businesses in the SERSA (SC, 2013b). Of these, 814 companies (87%) were located in the RSA and 104 were located in the LSA. The majority of these companies (508 or 55%) were specialty trade contractors, 283 companies (31% of the total) constructed buildings, and the remaining 127 companies (14%) were heavy and civil engineering construction companies.

Information on the size of these companies, based on number of employees, was reported by 52% of these construction companies. As shown in **Figure 4.5-2**, most of these companies were very small: 55% had 1 to 4 employees and 23% had 5 to 9 employees. There were only 12 construction companies (3% of the total) that had more than 49 employees and 10 of these were located in the RSA.





Source: SC, 2013b

Figure 4.5-2: Number and size of Construction Companies in the SERSA in December 2012

Mining did not have a large presence in the SERSA in 2006; however, is included in this report because the Project will require a skilled workforce. A breakdown of the mining labour force by occupation as of 2006 is provided in **Table 4.5-4**. The SERSA had a reported 580 workers employed in the mining sector. Approximately 35% of the workforce was employed as trades, transport, and equipment operators and an additional 35% were employed in primary industry. Approximately 36% of the workers in the SERSA with experience in the mining industry resided in the LSA, and 55% of these lived in Fraser Lake.

Table 4.5-4: Mining Labour Force by Occupation, 2006

Occupation	LSA	RSA	SERSA
Mining Industry Labour Force	210	370	580
Management	10	20	30
Business, finance and administrative	15	10	25
Natural and applied science	15	45	60
Sales and service	0	20	20
Trades, transport and equipment operators	85	120	205
Primary industry	65	140	205
Processing, manufacturing and utilities	10	25	35

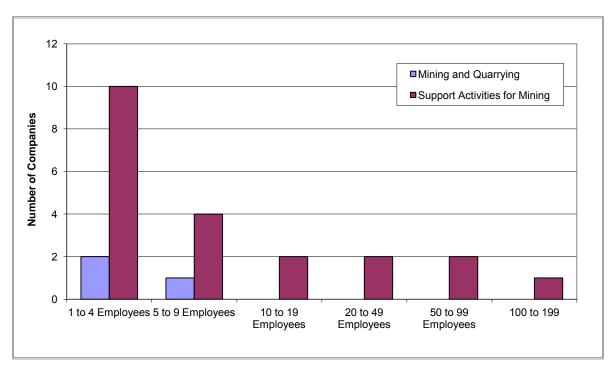
Note: LSA = Local Study Area; RSA = Regional Study Area; SERSA = Socioeconomic Regional Study Area

Source: SC, 2008



Since 2006, the number of SERSA residents with experience in the mining industry also increased. According to the NHS (SC, 2013), there were 795 people with experience in the mining industry in 2011 and this number excludes residents of Bulkley-Nechako RDEAs D and F for which no information was available. This represents an increase of 215 workers (37% increase) since 2006, with nearly all of the increase occurring in the RSA, mostly in Prince George. As of 2011, the NHS indicates that there were 555 workers in Prince George with experience in the mining industry, with another 130 in Fraser Lake and the other 110 scattered throughout the SERSA. Notably, in 2011 there were no workers with mining-related experience living in Vanderhoof or Fort St. James.

As of December 2012, there were seven mining and quarrying businesses reported in the SERSA and another 25 companies providing support to the mining and oil and gas industries (SC, 2013b). Only one of the mining and quarrying businesses companies was located in the LSA; all other companies were located in the RSA. Information on the size of these companies, based on number of employees, was reported by 84% of these mining and mining-related companies. As shown in **Figure 4.5-3**, most of these companies were very small: 50% had 1 to 4 employees and 21% had 5 to 9 employees. There were three mining-related companies in the RSA that had more than 49 employees.



Source: SC, 2013b

Figure 4.5-3: Number and size of Mining and Mining-Related Companies in the SERSA in December 2012



4.6 Work Activity

The 2011 NHS provided some information related to the number of people in the workforce who worked full-time and part-time in the previous year (2010), as well as the average number of weeks worked. As shown in **Table 4.6-1**, nearly 80% of the labour force in the SERSA worked full-time; this percentage was higher than the BC average. However, residents of the SERSA worked an average of 43.6 weeks per year, which was slightly less than the provincial average (43.9 weeks). Within the SERSA, residents of the LSA were less likely to work full-time than residents of the RSA, and residents of the LSA worked less per year (an average 42.8 weeks) than did residents of the RSA (43.6 weeks per year).

Table 4.6-1: Work Activity in the SERSA, 2011

Industry	LSA	RSA (%)	SERSA (%)	ВС
Worked full-time (%)	77.9	79.6	79.5	76.8
Worked part-time (%)	21.1	20.4	20.5	23.2
Average weeks worked	42.8	43.6	43.6	43.9

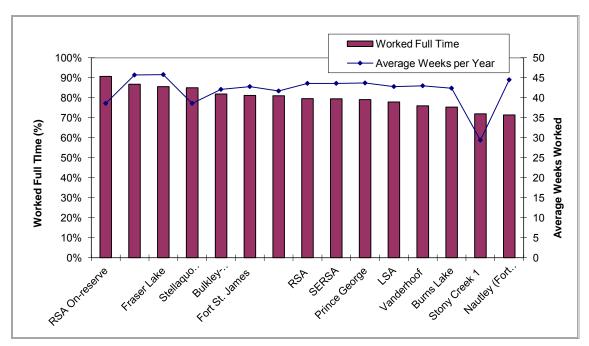
Note: BC = British Columbia; LSA = Local Study Area; % = percent; RSA = Regional Study Area;

SERSA = Socioeconomic Regional Study Area

Source: SC, 2013a

Figure 4.6-1 provides information on work activity for individual communities within the SERSA. Communities with the highest levels of full-time employment are shown on the left side of the figure. Residents of Aboriginal reserves in the RSA reported the highest levels of full-time employment in 2010, where 90.7% of residents worked full-time. However, this group also reported working fewer weeks per year (38.6 weeks) than did workers in most other population segments. Only residents of the Stony Creek 1 IR reported working fewer weeks per year (29.4 weeks). Fraser Lake and Fraser-Fort George RDEA C had high percentages of people working full-time and workers reported working an average of 45.7 weeks per year.





Source: SC, 2013a

Figure 4.6-1: Work Activity for Residents of Individual Communities, 2011

4.7 Summary

In 2011, the SERSA had a workforce of approximately 49,615 people, which is down from 52,910 people in 2006. The regional workforce represented 68.3% of the adult population in the SERSA and this participation rate was higher than the BC average (64.6%). However, the SERSA had a higher percentage of unemployed workers (10.3%) than in BC (7.8%) in 2011. Since then, this trend has largely continued, although unemployment rates in the Cariboo portion of the SERSA are currently less than the provincial average. Residents in the LSA are most likely to work in agriculture and manufacturing while RSA residents predominantly work in the other service and business service industries. Compared to the BC average, a slightly higher percentage of residents of the SERSA worked full-time, but worked slightly fewer weeks per year.

5.0 INCOME

5.1 <u>Introduction</u>

Construction and operation of the Project will create employment opportunities for residents of the LSA and SERSA, and will provide additional incomes. This section describes median earnings by residents of the study region, the composition of total incomes, the median incomes of families and households, and the percentage of households considered as having low incomes.



5.2 Information Sources and Methods

Information on earnings and income were taken from the 2006 Census (SC, 2007a and 2007b). The reported data are for the 2005 calendar year. The census data are reported as estimates for the individual communities. Regional estimates for the LSA, RSA, and SERSA have been calculated as weighted average median incomes. It should be noted that income and earnings data were not available for some communities. More recent income and taxation information was obtained from BC Stats (2011a). Income information collected as part of the 2011 NHS was not available at the time of writing.

5.3 <u>Individual, Family, and Household Income and Earnings</u>

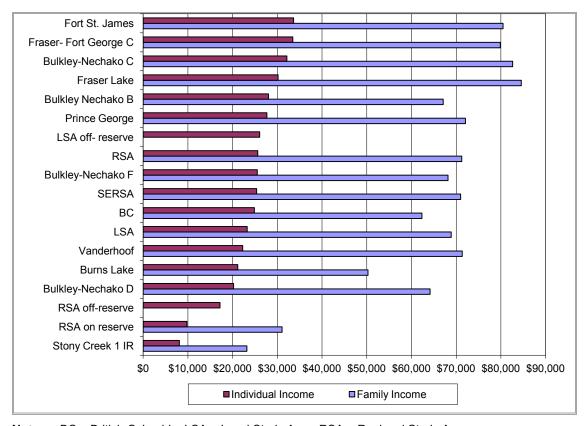
Information on income and earnings is available from the 2006 Census and relates to the 2005 calendar year. **Figure 5.3-1** shows the median household and individual incomes for the communities in the SERSA. Estimates for the LSA and RSA have been calculated as weighted average median incomes. The data show that the average median income for families in the SERSA (\$70,998) was 14% higher than the median family income for BC (\$62,346). The average median income for individuals in the SERSA (\$25,371) was 2% higher than for BC (\$24,867). In general, families and individuals in most communities within the SERSA had median incomes that were higher than the BC median.

Within the SERSA, the highest individual and family incomes were reported in Fort St. James, Fraser-Fort George RDEA C, Bulkley-Nechako RDEA C, and Fraser Lake. The household median income in these communities was \$80,000 or more and this was higher than the BC median of \$62,346 per household. Similarly, median individual incomes in these communities were above \$30,185 and this was also higher than the BC median (\$24,867).

As can be seen in **Figure 5.3-1**, the lowest incomes were reported for people living on reserves. The median incomes for individuals (\$9,767) and families (\$31,062) living on reserves in the RSA were equal to 38% and 44% of the average median incomes reported for the entire RSA. For Aboriginal people in the RSA who were living off reserves, their individual median income (\$17,203) was 76% higher than for individuals living on reserves, but this income was only 67% of the average median income reported for the RSA.

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Note: BC = British Columbia; LSA = Local Study Area; RSA = Regional Study Area;

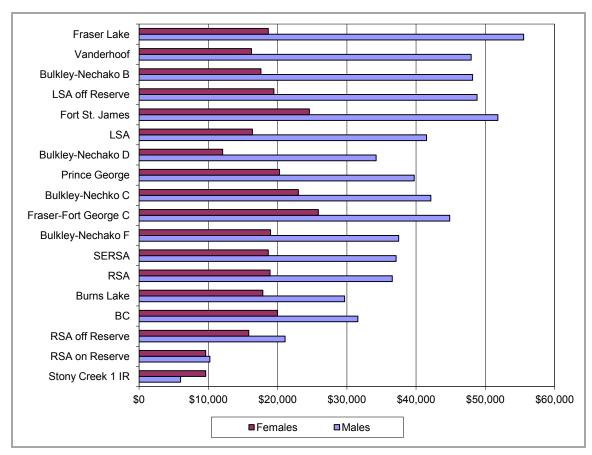
SERSA = Socioeconomic Regional Study Area

Source: SC, 2007a; SC, 2007b

Figure 5.3-1: Median Individual and Household Incomes in the SERSA, 2005

The median earnings for males in the SERSA (\$37,113) were twice as high as median female earnings (\$18,665). The median earnings for males and females are summarized in **Figure 5.3-2**. In all but one community, males had higher median earnings than females. Male median incomes were three times higher than median female earnings in Vanderhoof and Fraser Lake. In BC, the median income for males was 58% higher than for women. Other communities with large differentials in median incomes between sexes include Bulkley-Nechako RDEAs B and D, and Fort St. James. In the Stony Creek 1 IR, females reported a median income of \$9,632, which was 60% higher than the median income for males. The smallest differential in median incomes was for the off-reserve Aboriginal population in the RSA, where the median for males was only 6% higher than for females.





Note: BC = British Columbia; LSA = Local Study Area; RSA = Regional Study Area;

SERSA = Socioeconomic Regional Study Area

Source: SC, 2007a; SC, 2007b

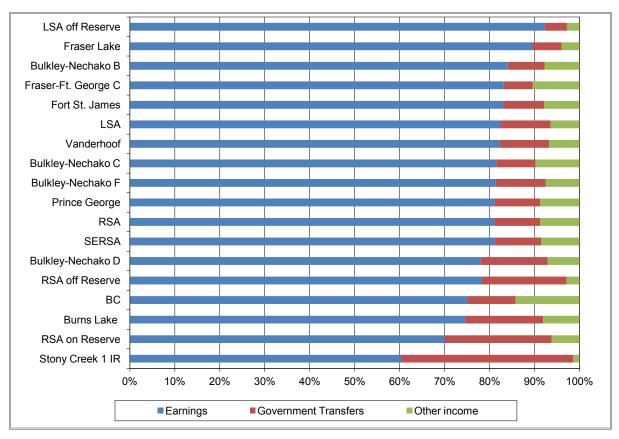
Figure 5.3-2 Median Annual Earnings by Gender in the SERSA, 2005

5.4 <u>Sources of Income</u>

Overall, 81% of income in the SERSA in 2006 came from earnings, 10% came from government transfers, and 9% came from other sources. Compared to the BC average where 75% of incomes were earned, 11% came from government transfers and 14% came from other sources; residents of the SERSA are more reliant on earnings as a source of income.

Figure 5.4-1 shows the mix of income sources for individuals living in communities in the SERSA. Communities that were most reliant on earned incomes are shown at the top of the figure, and include the LSA off reserve population (where earnings accounted for 92% of total income), Fraser Lake (90%), and Bulkley-Nechako RDEA B (84%).





Note: BC = British Columbia; LSA = Local Study Area; RSA = Regional Study Area;

SERSA = Socioeconomic Regional Study Area

Source: SC, 2007a; SC, 2007b

Figure 5.4-1 Composition of Total Income for Individual Communities in the SERSA, 2005

One of the key differences among communities relates to their reliance on income sources other than earnings. Residents of some communities were highly reliant on income from government transfers, such as Stony Creek 1 IR (38% of income came from government transfers), the RSA on-reserve population (24%), and the RSA off-reserve population (19%). Residents of Fraser Lake and Fraser-Fort George RDEA C were the least reliant on government transfers.

Although income from other sources (including savings and investments) accounted for only 9% of income in the SERSA, some communities were more reliant on these sources than others. The community that relied most on income from these other sources was Fraser-Fort George RDEA C, where 10% of income came from other sources, but this percentage was still less than the provincial average of 14%.



5.5 <u>Earnings from Employment</u>

In 2006, only 47.9% of workers in the SERSA were employed full-time, year-round. This is slightly higher than the provincial rate (46.5%). The percentage of people working full-time year-round was slightly higher in the RSA and lower in the LSA.

Table 5.5-1 shows that, in BC, people working full-time, year-round had earnings that were 64% higher than the medians earnings for the entire workforce. This differential was slightly larger in the SERSA, where the difference was 71%. However, there was a much greater difference in the LSA where people working full-time, year-round had earnings that were 104% higher than the medians earnings for the entire workforce. Large differences were also observed for the off-reserve Aboriginal population in the RSA.

Table 5.5-1: Full-Time and Part-Time Employment and Associated Median Earnings for Individuals in the SERSA and BC, 2005

	Working Full-Time	Median	Incomes (\$)
Population Segment	Year-Round (%)	All Workers	Full-Time Workers
LSA	47.4	23,284	47,431
RSA	48.0	25,622	43,027
SERSA	47.9	25,371	43,473
Off-reserve Aboriginal LSA	51.7	26,050	47,372
Off-reserve Aboriginal RSA	45.4	17,203	36,610
BC	46.5	25,722	42,230

Note: BC = British Columbia; LSA = Local Study Area; % = percent; RSA = Regional Study Area;

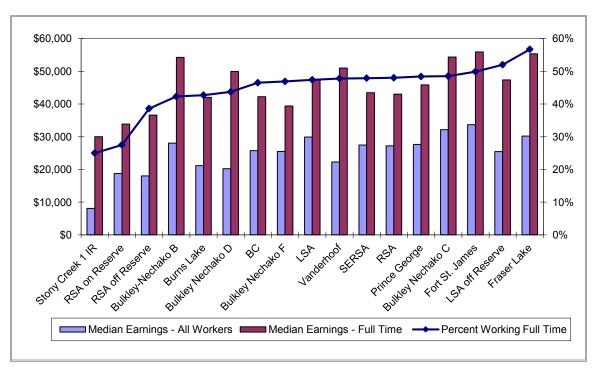
SERSA = Socioeconomic Study Area

Source: SC, 2007a; SC, 2007b

Figure 5.5-1 shows median earnings for all workers and people who worked full-time, year-round. The communities are listed according to the percentage of the workforce that worked full-time, year-round. **Figure 5.5-1** shows that the percentage of study area residents who were employed full-time, year-round ranged from 25% (Stony Creek 1IR) to 57% (Fraser Lake) and the majority of the communities fell between 42% and 49%.

Figure 5.5-1 shows that earnings for people working full time year-round were substantially higher than average earnings for all workers. Overall, the median earnings for people working full time year-round were nearly twice the median earnings for all workers. The largest differences were for residents of the Stony Creek 1 reserve (270% higher), Bulkley-Nechako RDEA D (147%), and Vanderhoof (129% higher). However, in the RSA, the LSA and the SERSA, the median earnings for people working full-time, year-round were 58% higher than the median earnings for all workers.





Note: % = percent

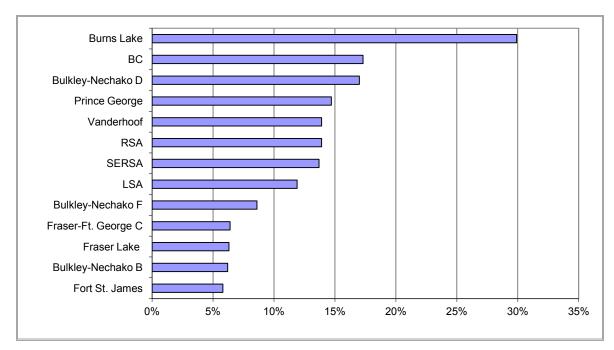
Source: SC, 2007a; SC, 2007b

Figure 5.5-1: Full-Time and Part-Time Employment and Earnings in the SERSA, 2005

5.6 Incidence of Low Household Income

Figure 5.6-1 shows the percentage of households in each community that are considered to have low incomes. Low income is defined as families or persons that spend 20% more than average of their income (before tax) on food, shelter, and clothing. This information is not reported for Aboriginal communities. The data indicate that, overall, 13.7% of households in the SERSA have low incomes; this is less than the provincial average (17.3%). Within the study area, the RSA had a higher incidence of households with low income (13.9%) and the LSA reported a lower percentage of low-income households (11.9%). Communities within the SERSA with higher percentages of lower income households include Burns Lake (29.9%), Bulkley-Nechako D (17.3%), Prince George (14.7%), and Vanderhoof (13.9%)





Note: LSA = Local Study Area; % = percent; RSA = Regional Study Area;

SERSA = Socioeconomic Regional Study Area

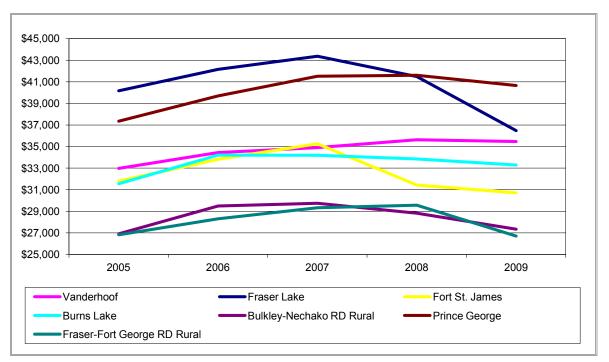
Source: SC, 2007a, SC, 2007b

Figure 5.6-1: Incidence of Low Income Households in the SERSA, 2006

5.7 Changes in Income Since 2005

Average incomes have increased since the 2006 census. According to BC Taxation Statistics (BC Stats, 2011a), the average per capita income in the SERSA increased from \$36,208 in 2005 to \$39,975 in 2009, which represents an increase of 7.6%. **Figure 5.7-1** shows that Vanderhoof is the only community that reported a sustained, steady growth in average incomes, with a total increase of 7.6% over the four-year period. For all other communities, average incomes rose between 2005 and 2007 and then declined in 2008 and 2009. For the entire four year period, average incomes increased in Prince George (by 8.9%), Burns Lake (by 5.5%), and the rural areas of the RDBN (by 1.6%) but decreased in Fraser Lake (by 9.2%), Fort St. James (by 3.4%), and the rural areas of RDFFG (by 0.4%). Taxation data are not reported for Aboriginal communities.





Source: BC Stats, 2011a

Figure 5.7-1: Average Per Capita Income in the SERSA, 2005 – 2009

5.8 <u>Summary</u>

Median incomes in the SERSA are similar to the BC average. The sources for income in the study area were also similar to the BC rates; the majority of which comes from earnings. The rates of SERSA residents who work full-time, year-round, and the subsequent income was on par with the BC rate; however, the region had few incidences of lower incomes than BC.

6.0 LABOUR FORCE QUALIFICATIONS

6.1 Introduction

Construction and operations of the Project may create employment opportunities for residents of the LSA and RSA. The potential for employment of regional residents will ultimately depend on their education and qualifications. This section summarizes the educational attainment of study area residents.

6.2 <u>Information Sources and Methods</u>

Information on educational attainment was obtained from the 2006 Census (SC, 2007a; SC, 2007b) and the 2011 NHS (SC, 2013a).



6.3 Education Attainment

Educational characteristics of the adult population of the SERSA (people aged 15 years and older) are shown in **Table 6.3-1**. In general, adults in the SERSA were less educated than BC residents as a whole. In 2006, 26.6% of adults in the SERSA had no certificate, diploma, or degree compared to 19.9% of adults in BC. By 2011, the percentage of adults in the SERSA with no certificate, diploma, or degree had decreased to 22.8%, but this was still higher than the provincial average (16.7%). However, a higher percentage of adults in the SERSA had an apprenticeship or trades certificate or diploma than did adults in BC. In 2006, 12.9% of adults in the SERSA had an apprenticeship or trades certificate or diploma, which increased to 13.5% in 2011. In comparison, 10.9% of adults in BC had an apprenticeship or trades certificate or diploma in 2006, which decreased to 10.6% in 2011.

Table 6.3-1: Educational Attainment of the Adult Population in the SERSA, 2006 and 2011

	LSA (%)		RSA (%)		SERSA (%)		ВС	
Industry	2006	2011	2006	2011	2006	2011	2006	2011
No certificate, diploma, or degree	31.9	29.9	25.9	22.3	26.6	22.8	19.9	16.7
High school certificate or equivalent	33.5	30.6	29.7	30.6	30.1	30.6	27.9	27.7
Apprenticeship or trades certificate or diploma	12.0	12.3	13.0	13.6	12.9	13.5	10.9	10.6
College or other non-university certificate or diploma	13.8	14.9	16.1	17.4	15.8	17.2	16.7	17.2
University certificate or diploma below the bachelor level	1.6	2.5	3.1	3.1	3.0	3.1	5.4	5.7
University certificate, degree, or diploma	7.1	9.2	12.2	13.0	11.6	12.7	19.3	22.1

Note: BC = British Columbia; LSA = Local Study Area; % = percent; RSA = Regional Study Area;

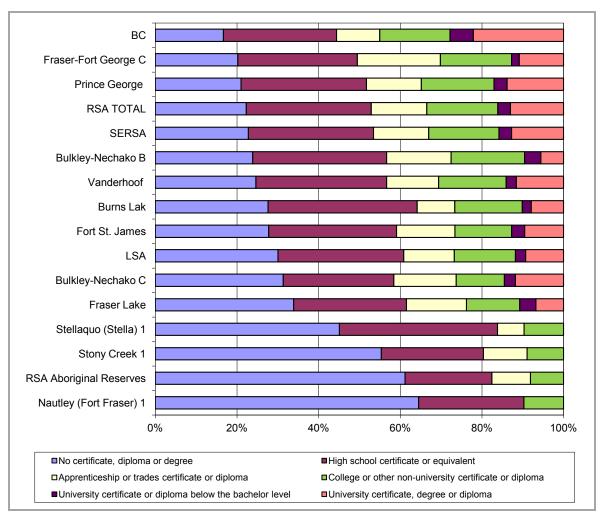
SERSA = Socioeconomic Regional Study Area

Source: SC, 2007a; SC, 2007b; SC, 2013a

Within the SERSA, adults in the LSA had lower levels of educational attainment than adults in the RSA. In 2011, 29.9% of adults in the LSA had no certificate, diploma, or degree, which was down from 31.9% in 2006. However, the percentage of adults in the RSA with no certificate, diploma, or degree was 22.3% in 2011 and 25.9% in 2006. The RSA had higher percentages of adults with an apprenticeship or trades certificate or diploma than did the LSA.

The education attainment characteristics of the adult population for the individual communities in the SERSA are compared in **Figure 6.3-1** with the communities having the highest level of educational attainment (the lowest percentage of people without high school education) being listed at the top.





Note: LSA = Local Study Area; % = percent; RSA = Regional Study Area; SERSA = Socioeconomic Study Area

Source: SC, 2013a

Figure 6.3-1: Educational Attainment of People Aged 15+ in the SERSA, 2011

The percentage of the adult population with no certificate, diploma, or degree ranged from 62.5% for adults on the Nautley (Fort Fraser) 1 reserve and reserves in the RSA to 20.2% of adults in Fraser-Fort George RDEA C. The percentage of adults who had obtained an apprenticeship or trades certificate or diploma ranged from a low of 0% in Nautley (Fort Fraser) 1 IR to 20.3% in Fraser-Fort George RDEA C. The highest level of education was found in Prince George, where 13.8% of the adult population had a university certificate, degree, or diploma. Other communities with high percentages of adults with a university certificate, degree, or diploma include Bulkley-Nechako RDEA C (11.8%) and Vanderhoof (11.5%).



6.4 <u>Summary</u>

Overall, adults in the SERSA have lower levels of education attainment than the provincial average, with 22.8% of the adult (15+ years of age) population not having completed high school. Approximately 13.5% of the adult population in the SERSA has an apprenticeship or trades certificate or diploma.

7.0 ECONOMIC PROSPECTS

7.1 Introduction

The Project may create employment opportunities for residents of the SERSA. The extent to which residents take advantage of those opportunities will depend, in part, on competing demands for labour from other economic development activities that occur at the same time. This section identifies these competing projects and estimates of their labour requirements.

7.2 Information Sources and Methods

A list of proposed major projects in BC is issued periodically by the BC Ministry of Jobs, Tourism, and Skills Training (BC MJTST). The latest version of the list was issued in March 2013 and identifies projects in each provincial economic development region with a capital cost in excess of \$15 million. This assessment focuses on major projects located near major communities in the study area, or major projects that would draw resources from those communities. These projects are listed in **Table 7.3-1**.

7.3 <u>Major Projects</u>

In terms of future economic development, 29 major projects valued at approximately \$2.33 billion have been proposed, are on hold, or are currently under construction in the SERSA (**Table 7.3-1**). At present, nine projects with a combined value of \$2.17 billion were under construction. The largest of these is the Mt. Milligan gold/copper mine being constructed northeast of Fort St. James. These nine projects are expected to be completed by the end of 2013.

Another five projects valued at \$613 million are on hold. Many of these projects have been listed on the major projects list for some time and there is no information as to if or when these projects will proceed.



Table 7.3-1: List of Major Projects Proposed, On Hold, and Under Construction, 2013

Location	Name	Description	Value (\$M)	Start Date	End Date
		Projects Under Construction	ı		ı
Fort St. James/ Mackenzie Region	Mt Milligan Mine	Construction is underway on a copper/gold mine located 150 km northwest of Prince George with an ore production rate of 60,000 t/d and an expected mine life extended to 22 years. The project has received federal approval and certification under the BC <i>Environmental Assessment Act</i> .	1,265	Summer 2010	Fall 2013
Prince George	Boundary Road Connector	A 6.6 km, 2-lane connector road from Highway 97 South to Highway 16 East. The project will receive \$7.5 million each from the federal and provincial governments, and \$6.5 million each from the City of Prince George and the Prince George Airport developers.	28	Jun 2010	Summer 2013
Prince George	Hotel and Condominium Development	Proposed 12-storey hotel with 150 rooms and 35 executive condominiums, including a 5,500ft ² conference space, spa, and restaurant.	40	Summer 2012	Late 2013
Prince George	Western Coal Expansion	Walter Energy Inc.; expand existing capacity from 0.9 Mt/y to 3.7 Mt/y. Expansion would increase production at the Willow Creek Mine.	230	Summer 2011	2013
Prince George	Prince George Pulp Plant Upgrades	Feed water treatment system upgrades to Prince George Pulp include: boiler feed water system, completing in late 2012; and the addition of a precipitator to the exhaust system, expected to complete in late 2013. Project will receive funds under the federal Pulp and Paper Green Transformation Program.	30	Aug 2011	Late 2013
Prince George	PGP Bio Energy Project	Canfor Pulp/Canfor Corporation; bioenergy project at the Canfor Pulp Mill to produce power, charcoal, and bio-oil from pine beetle wood and logging waste.	50	Sep 2009	?
Prince George	Prince George RCMP Municipal Attachment	RCMP/City of Prince George; a new 64,000 ft ² RCMP headquarters.	39	Fall 2011	Sep 2013
Prince George	Prince George Field Building	BC Hydro; renovation and expansion of an existing field building.	47	Aug 2011	Late 2013
Prince George to Cache Creek	Cariboo Connector – Highway 97 Improvements	BC Ministry of Transportation and Infrastructure; 4-lane highway improvements spanning 460 km from Prince George to Cache Creek.	440	Summer 2005	Summer 2017
	·	Proposed Projects		,	
Burns Lake	Cheslatta Green Energy Project	Pristine Power Inc./Cheslatta Forest Products; 10 MW power plant that will convert wood residue into electricity for 9,500 homes.	46	?	?
Burns Lake	Lakes District Hospital Replacement	The existing facility will be replaced by a new 16-bed hospital that will provide emergency and acute care and include a laboratory and diagnostic imaging.	55	Summer 2013	Fall 2015

Table continues...



Location	Name	Description	Value (\$M)	Start Date	End Date
Burns Lake	Babine Forest Products Mill Replacement	Hampton Affiliates have proposed rebuilding the Babine Mill that was destroyed by fire in January 2012.	100	Spring 2013	Early 2014
Fort St. James	Fort Green Energy Project	Western Bioenergy Inc.; 40 MW biomass energy project.	120	?	?
Fraser Lake	Fraser Lake Sawmill Biomass Project	West Fraser Mills Ltd.; 12 MW plant that will convert mill waste into energy.	20	?	?
Vanderhoof	Nulki Hills Wind Project	Innergex Wind Energy Inc.; Phase 1: wind power project that will include 70 wind turbines.	45	?	?
Prince George	Northwood Green Power Generation Project	Canfor Pulp Limited Partnership; bioenergy call for power.	100	?	?
Prince George	Prince George Global Logistics Park	Proposed 1,700 acre industrial park located near the Prince George Airport. Phase 1 of the project is ready for development with 19 serviced lots.	382	?	?
Prince George	Coast Hotel Expansion	Coast Hotels and Resorts Inc.; 75-room expansion to the existing property.	15	?	?
Prince George	Lakeland Mills Sawmill Replacement	Replacement of Lakeland Mills sawmill that was destroyed by fire in April 2012. The sawmill will integrate with the existing planer mill and energy system that operates in partnership with the City of Prince George.	15	Spring 2014	?
Prince George	Lorraine-Jayjay Copper Mine	Exploration and feasibility reviews underway for a potential copper mine located 280 km northwest of Prince George. The property covers 28,000 ha with the potential to produce 100 Mt to 200 Mt.	100	?	?
Prince George	Alterna Biocarbon Manufacturing Facility	Biocarbon Production Facility, which will have the capacity to convert 110,000 t/y of green wood residues into 25,000 t/y of biocarbon.	15	Spring 2013	Fall 2014
Prince George	Hart North Industrial Site	Development of 3,000 ha industrial site.	Unknown	?	?
Prince George	Wood Innovation and Design Centre	BC Ministry of Transportation and Infrastructure proposed the development of a research and academic centre. The site and three preferred builders have been identified to respond to the Request for Proposal.	?	Spring 2013	Fall 2014
Prince George	Hotel Development	156-room hotel development will include 35 condominium units and a 5,500 ft ² conference centre. The 12-storey project is located at 1355 10 th Avenue.	40	Fall 2013	Summer 2014
		Projects on Hold			
Burns Lake	Ditni Yoh Green Energy Project	Western Bioenergy Inc.; 35 MW power plant using wood residue.	140	?	?
Prince George	Giscome Quarry and Lime Project	Graymont Western Canada Inc.; Lime processing facility and mine near Price George, with an annual production of 600,000 t/y for 25 years.	130	?	?

Table continues...

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Location	Name	Description	Value (\$M)	Start Date	End Date
Prince George	Groundhog Coal Fields	West Hawk Development Corp./Anglo Pacific Group, a joint venture known as Discovery Creek Development Company.	200	?	?
Prince George	Performing Arts Centre	City of Prince George; 800-seat environmentally friendly theatre.	43	?	?
Prince George	Mount George Wind Park	Fred Olson Renewables Ltd.; 300 MW wind farm located 38 km southeast of Prince George.	100	?	?

Note: BC = British Columbia; ha = hectare; km = kilometre; Mt = million tonnes; MW = megawatt; RCMP = Royal Canadian Mounted Police; ft² = square feet;

t/d = tonnes per day; t/y = tonnes per year

Source: BC MJTST, 2013



A total of 15 projects have been proposed at locations in the SERSA and the estimated total cost of 13 of these projects is \$1.05 billion. The largest of these proposed projects include the Global Logistics Park in Prince George (\$382 million), the Fort Green Energy Project near Fort St. James (\$120 million), the Northwood Green Power Generation Project at Prince George (\$100 million), and the Lorraine-Jayjay Copper Mine near Prince George (\$100 million). Two large projects proposed in the Vanderhoof region, the Chu molybdenum mine (\$1,040 million) and the Kenney Dam Cold Water Release Facility (\$275 million) were either recently dropped as a major project or were considered unlikely to be constructed in the foreseeable future.

It should be noted that this list does not include various major linear energy projects, such as the Northern Gateway Pipeline Project, the Spirit Pipeline – TMX North Project, and the Kitimat-Summit Lake Pipeline Looping Project, which would involve pipeline construction activities through parts of the SERSA.

7.4 <u>Summary</u>

Currently, there is considerable construction activity in the SERSA, with nine projects valued at \$2.17 billion to be completed by the end of 2013. There are a number of proposed projects or projects on hold that may commence after 2013 and consequently compete with the Project for labour, goods, and services. There are 20 such projects, excluding proposed pipelines through the area, with a combined value of \$1.67 billion.

8.0 REGIONAL GOVERNMENT FINANCE

8.1 <u>Introduction</u>

Construction and operations of the Project, and any expansion of regional businesses to support these activities, will ultimately increase the assessment base for regional governments and potentially provide an additional source of regional government revenues. At the same time, project development and the demands of a growing project-related population may create additional demands for regional government services. This section describes the revenues, expenditures, and assessment base of municipal and regional governments in the study region.

8.2 Information Sources and Methods

All information on municipal and regional government revenues and expenditures, assessment base, and tax rates was obtained from the BC Ministry of Community, Sport and Cultural Development (BC MCSCD) (2012). The most recent information on revenues and expenditures is for 2011.



8.3 Cities and Towns

8.3.1 Municipal Revenues

Revenues reported for the five communities over the period from 2009 to 2011 are shown in **Table 8.3-1**. Annual revenues are highly variable for the four smaller communities, and are very large and growing for Prince George.

Table 8.3-1: Consolidated Revenues by Community, 2009 to 2011

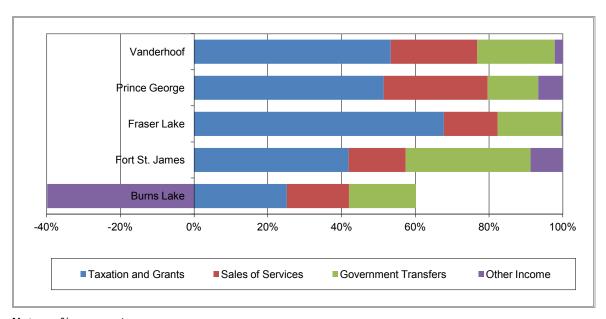
Community	2009 (\$M)	2010 (\$M)	2011 (\$M)
Burns Lake	1.48	3.58	1.38
Fort St. James	5.39	6.13	3.90
Fraser Lake	5.40	3.01	3.80
Prince George	138.21	145.31	163.24
Vanderhoof	9.26	9.97	7.21

Source: BC MCSCD, 2012

Figure 8.3-1 summarizes the magnitude and sources of municipal revenues received by each of the major communities in the region for 2011, the most recent year for which municipal statistics are available. Taxation and grants are the primary contributors to total revenues for four of the five communities, accounting for between 42% (Fort St. James) and 68% (Fraser Lake) of total revenues. The revenue assessment for Burns Lake for 2011 is unusual because of a large reported loss of income from government business enterprise (\$2.83 million). If this loss is ignored, the total revenues would have been \$4.20 million of which taxation and grants would have accounted for 41%. Revenues from sales of services accounted for approximately 15% of total revenues in Fort St. James and Fraser Lake, 23% of revenues in Vanderhoof, and approximately 27% in Prince George and Burns Lake. Government transfers represented an important source of revenue in Fort St. James (34%) and Burns Lake (29%) but only 14% of revenues for Prince George. While all communities reported some revenues from other sources, these amounts were only large in Fort St. James (9% of total revenues) and Prince George (7%).

For rural populations, financial information is reported by regional districts and not for individual RDEAs.





Note: % = percent Source: BC MCSCD, 2012

Figure 8.3-1: Sources of Municipal Government Revenues in the SERSA, 2011

8.3.2 Municipal Expenditures

Municipal expenditures for the five communities over the period from 2009 to 2011 are shown in **Table 8.3-2**. Unlike revenues, the expenditures for most communities did not fluctuate and tended to increase or hold steady over the three year-period.

Table 8.3-2: Consolidated Expenditures by Community, 2009 to 2011

Community	2009 (\$M)	2010 (\$M)	2011 (\$M)
Burns Lake	3.26	3.35	3.51
Fort St. James	3.48	4.64	3.70
Fraser Lake	3.02	2.41	2.51
Prince George	129.36	127.67	129.37
Vanderhoof	6.50	6.55	7.50

Source: BC MCSCD, 2012.

Table 8.3-3 shows the percentage of annual expenditures on various operating costs. The City of Prince George allocated the largest percentage of the operating budget (29%) on protective services. For the other communities, expenditures on protective services accounted for 11% or less of the total. Other major expenditures included parks, recreation, and culture (10% to 17% of total spending), transportation and transit (11% to 24%), general government (12% to 31%), and amortization costs (15% to 28%). For the individual



communities, spending on general government was the largest cost items for Burns Lake, Fort St. James, and Fraser Lake, and amortization costs accounted for a large percentage of costs for Vanderhoof. For rural populations, financial information is reported by regional districts and not for individual RDEAs.

Table 8.3-3: Municipal Government Expenditures in the SERSA, 2011

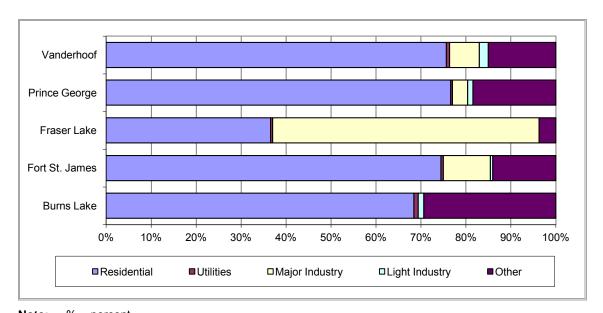
Expenditure	Burns Lake (%)	Fort St. James (%)	Fraser Lake (%)	Prince George (%)	Vanderhoof (%)
General government	22	31	30	12	12
Protective services	11	11	6	29	7
Waste, water, and sewer	18	12	17	11	12
Health, social services, and housing	0	0	0	0	0
Development services	2	0	3	2	0
Transportation and transit	19	21	11	16	24
Parks, recreation, and culture	14	10	16	17	16
Other	0	-3	0	2	1
Amortization	15	18	17	12	28
Total Expenditures (\$M)	3.51	3.70	2.51	129.37	7.50

Source: BC MCSCD, 2012

8.3.3 Current Assessment Base and Municipal Tax Rates

The municipal assessment base for the major communities in the SERSA in 2012 ranged from \$99 million in Burns Lake to \$7.25 billion in Prince George. The assessment base was \$127 million for Fort St. James, \$148 million for Fraser Lake, and \$414 million for Vanderhoof. Figure 8.3-2 shows that four of the five communities are highly reliant on residential property as their tax assessment base. In these communities, residential properties accounted for at least 68% (Burns Lake) and as much as 77% (Prince George) of the assessment base. For these same communities, other properties (mainly business properties) accounted for the second largest component of the assessment base. The exception was Fraser Lake where residential properties accounted for 37% of the assessment base and major industrial properties accounted for 59%. In other communities, major industrial properties accounted for 10% or less of the assessment base and there was no major industrial tax base in Burns Lake.



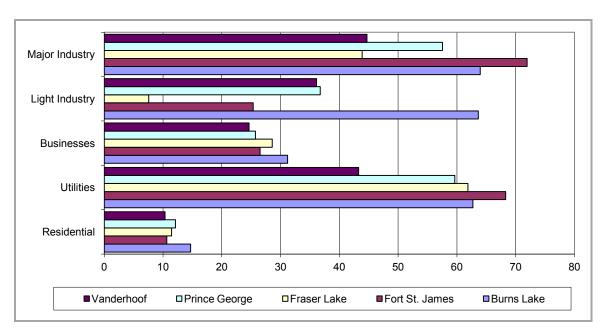


Note: % = percent Source: BC MCSCD, 2012

Figure 8.3-2: Municipal Assessment Base for Communities in the SERSA, 2012

Municipal tax rates are selected to generate the revenue requirements for each community from its assessment base. Tax rates are described in terms of the taxes paid per dollar of assessed value and are measured in terms of mills, with one mill being equal to 1/10 of a cent. **Figure 8.3-3** shows that the tax rate on residential property is the lowest, with the higher property tax rates for utilities and major industry. In general, the tax rates for various types of properties are quite similar. However, Fort St. James had the highest taxation rates for major industry and utilities and Burns Lake had the highest rates for light industry businesses and residential properties. The taxation rate for light industry in Fraser Lake was much lower than in the other communities.

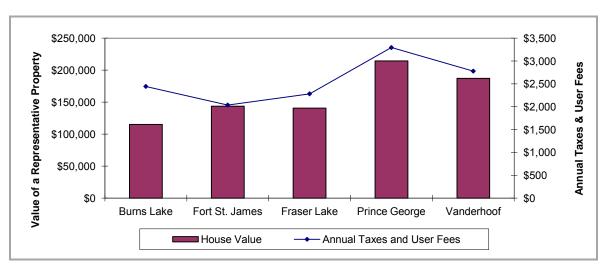




Source: BC MCSCD, 2012

Figure 8.3-3: Municipal Tax Rates for Communities in the SERSA, 2012

Given the tax rates, it is possible to determine the annual taxes on a representative house in each of the five communities. **Figure 8.3-4** shows that the value of a representative house in 2012 ranged from a low of approximately \$115,300 in Burns Lake to a high of \$214,400 in Prince George. A representative house was valued at \$143,800 in Fort St. James, \$140,600 in Fraser Lake, and \$187,100 in Vanderhoof. Annual tax payments, including school, hospital, municipal, regional taxes, and residential user fees, ranged between \$2,037 in Fort St. James and \$3,295 in Prince George.



Source: BC MCSCD, 2012

Figure 8.3-4: Taxes and Charges on a Representative House in the SERSA, 2012

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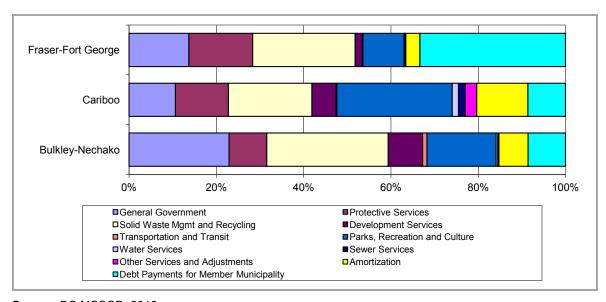


8.4 Regional Government Finances

Regional governments employ a different process for financing operations. Unlike municipalities, regional districts do not levy and collect taxes directly from residents. Instead, regional districts requisition their annual budgets, which are based on an approved five-year financial plan from the BC MCSCD (2012). The requisitions are based on the cost of the services to be provided by the regional district, including costs shared with municipalities within the region, and are used to determine the appropriate tax rates. Property taxes are then collected on behalf of the regional districts by the BC Surveyor of Taxes. Regional districts also can charge users fees for services they provide and may obtain revenues from grants or investments.

Each regional district is responsible for providing a broad range of services including water supply, sewer, fire protection, parks and recreation, solid waste management, economic development, libraries, and Emergency 911 services.

The expenditures for the RDBN, RDFFG, and CRD for 2011 are provided in **Figure 8.4-1**. Total expenditures ranged from \$10.1 million in the RDBN to \$36.1 million in the RDFFG and \$26.2 million in the CRD. Three expenditure items accounted for the majority of expenditures in the three regional districts: solid waste management and recycling; parks, recreation and culture; and general government. For the RDFFG, the largest amount of annual expenditures was for debt payments (33% of total spending). For the RDBN, the largest expenditure was for waste management (28% of total spending). For the CRD, 26% was spent on parks, recreation, and culture.



Source: BC MCSCD, 2012. **Note:** % = percent.

Figure 8.4-1: Expenditures for the RDBN, RDFFG, and CRD, 2011



8.5 Summary

The majority of the municipal revenue in Burns Lake, Fraser Lake, and Prince George came from taxation; however, in Vanderhoof and Fort St. James, the largest source of revenue was government transfers. The focus of municipal expenditures for all urban centres in the SERSA was transportation, waste, water, and general. The primary source for tax revenue was from residential houses; however, Fraser Lake also received a large portion of tax revenue from major industry. The rate of taxation (residential versus business, versus light industrial, etc.) tended to be similar in all urban centres with a few notable exceptions. Fraser Lake reported low 2010 tax rates on light industry while the tax rates on major industry in Fort St. James are the highest in the study area. The regional districts receive operating budgets from the provincial government, based on proposed five-year budgetary plans. These plans cover all the components for which the regional districts are responsible including, but not limited to, fire protection and parks and recreation. All three regional districts invested in waste management; however, RDBN focused on general government, while RDFFG directed funds to debt repayment.

9.0 COMMUNITY SUMMARIES

The following sections provide a summary of available baseline economic information for each of the communities in the LSA, including Aboriginal communities, and for most communities in the RSA. Summaries of economic conditions for each populated Indian reserve within the RSA were not provided because many of these communities are quite small and it is unlikely that potential Project effects could be identified for individual reserves. Baseline socioeconomic conditions for 2006 are provided in **Table 9.1-1** and 2011 information is summarized in **Table 9.1-2**.

9.1 <u>Local Study Area</u>

9.1.1 District of Vanderhoof

In 2006, the District of Vanderhoof had an active workforce of 2,170 people, representing 38% of the labour force in the LSA. As of 2011, the active workforce had increased to 2,265 people. A relatively high percentage of adults in the community were either working or looking for work (67.8% in 2011, down from 70.7% in 2006) and 9.9% were unemployed. The two largest employers in the community are in the logging and forest products industry and account for approximately 450 workers. However, the community has a relatively large service sector, with 1.99 non-basic (service sector) jobs for every basic job (which includes employment in agriculture and other resource-based industries, construction, and manufacturing). In 2011, 76.0% of workers in Vanderhoof were employed full-time (this is less than the LSA average) and, on average, workers worked 43.0 weeks per year. There were 742 registered businesses in Vanderhoof in December 2012, which represents 80% of all registered businesses in the LSA.



Vanderhoof reported a median family income in 2005 (\$71,358) that was higher than the LSA average, but the median income for individuals (\$22,283) was slightly below the LSA average. Government transfers accounted for 10.9% of total income and 13.9% of households were considered to have low incomes. Between 2005 and 2009, average incomes increased by 8%. Residents of Vanderhoof had a relatively high level of educational attainment; in 2011, only 24.6% had not completed high school.

One major project, the Nulki Hills Wind Project, which is expected to cost \$45 million, has been proposed for the area around Vanderhoof, but there is no proposed commencement date for project construction.

The District of Vanderhoof reported total revenues of \$7.2 million in 2011, of which 53% came from taxation and grants. It had expenses of \$7.5 million, with amortization of debt accounting for 28% of these costs and transportation and transit accounting for another 24%. The majority of the tax assessment base for the community (76%) consists of residential property. The District currently has the lowest residential tax rates in the SERSA; however, it has the highest tax rates on industrial property.



Table 9.1-1 Summary of Economic Conditions in Communities in the SERSA, 2006

			Labour Force	e (2006)	Sectoral Er	nployment (2006)	Education	Income (2005)			
Study Area	Community	Count	Participation Rate (%)	Unemployment Rate (%)	Non-Basic/ Ratio	Participation in Resource-based Industries (%)	No Grade 12 (%)	Median Family (\$)	Median Individual (\$)	Income - Transfer Payments (%)	Low Income Households (%)
LSA	Vanderhoof	2,170	70.7	6.7	1.89	11.8	30.4	71,358	22,283	10.9	13.9
	Fraser Lake	600	68.6	6.7	0.52	25.6	28.6	84,568	30,185	6.5	6.3
	Stony Creek 1	80	52.5	40.6	2.22	11.5	65.6	23,200	8,112	38.0	-
	Laketown 3	-	-	-	-	-	-	-	-	-	-
	Seaspunkut 4	-	-	-	-	-	-	-	-	-	-
	Nautley (Fort Fraser 4)	70	60.9	28.6	2.25	16.7	62.5	-	-	-	-
	Stellaquo (Stella) 1	75	55.6	13.3	-	-	59.3	-	-	-	-
	Bulkley-Nechako F	1,790	73.7	7.0	0.92	28.4	32.9	68,177	25,524	11.1	8.6
	Bulkley-Nechako D	870	64.4	12.6	0.67	32.6	22.3	64,168	20,216	14.9	17.0
	Sub-Total	5,735	69.3	9.0	1.12	21.8	31.8	68,896	23,284	11.1	11.9
RSA	Prince George	40,870	72.0	7.6	3.40	6.1	24.7	72,055	27,670	10.1	14.7
	Fort St. James	760	71.0	7.9	1.32	13.2	23.4	80,483	33,649	9.0	5.8
	Burns Lake	1,010	63.3	11.4	2.34	7.9	36.4	50,268	21,171	17.3	29.9
	Indian Reserves ⁽¹⁾	635	50.4	29.1	1.04	11.0	66.3	31,062	9,767	23.8	-
	Fraser-Fort George C	1,930	73.8	7.3	1.07	13.9	21.8	79,871	33,474	6.5	6.4
	Bulkley-Nechako B	1,130	74.8	8.9	1.36	20.1	28.4	67089	28,034	8.2	6.2
	Bulkley-Nechako C	735	68.4	7.5	0.82	26.7	31.6	82,633	32,134	8.8	5.5
	Sub-Total	47,175	71.5	8.0	2.98	7.3	25.9	71,251	25,622	10.1	13.9
SERSA		52,910	71.2	8.1	2.64	8.9	26.6	70,988	25,371	10.2	13.7

Note: (1) Includes Nak'azdli (Necoslie 1), Williams Prairie Meadow 1A, Sowchea 3, North Tacla Lake, Dzitline Lee 9, Tache 1, Binchie 2 (Pinchie 2),

Ye Koo Che 3, Burns Lake 18, Woyenne 27, Duncan Lake 2, Palling 1

Source: SC, 2007a, SC, 2007b



Table 9.1-2 Summary of Economic Conditions in Communities in the SERSA, 2011

			Labour Fo (2006)			Sectoral Employment (2006)		Work Activity			
Study Area	Community	Count	Participation Rate (%)	Unemployment Rate (%)	Non-Basic/ Ratio	Participation in Resource-based Industries (%)	No Grade 12 (%)	Full Time (%)	Part Time (%)	Average Weeks per Year	No. of Businesses (December 2012)
LSA	Vanderhoof	2,265	67.8	9.9	1.99	10.6	24.6	76.0	24.0	43.0	742
	Fraser Lake	585	66.9	7.7	0.60	29.3	34.1	85.6	14.4	45.8	90
	Stony Creek 1	165	57.9	48.5	2.13	12.0	53.4	72.0	28.0	29.4	-
	Laketown 3	-	-	-	-	-	-	-	-	-	-
	Seaspunkut 4	-	-	-	-	-	-	-	-	-	-
	Nautley (Fort Fraser 4)	35	22.6	0.0	0.50	33.3	62.5	71.4	28.6	44.5	-
	Stellaquo (Stella) 1	110	68.8	22.7	0.90	36.8	42.4	85.0	15.0	38.6	-
	Bulkley-Nechako F				N	lot available					20
	Bulkley-Nechako D				١	lot available					71
	Sub-Total	3,160	65.6	11.9	1.54	14.9	29.9	77.9	22.1	42.8	923
RSA	Prince George	39,950	69.0	9.9	3.76	5.4	21.0	79.1	20.9	43.7	5,336
	Fort St. James	815	64.7	11.0	1.34	8.6	27.8	81.2	18.8	42.8	0
	Burns Lake	995	63.4	12.1	1.71	10.9	27.6	75.3	24.7	42.4	372
	Indian Reserves ⁽¹⁾	675	52.5	34.1	1.81	15.6	58.9	90.7	9.3	38.6	-
	Fraser-Fort George C	2,090	72.6	9.8	2.62	10.0	20.2	86.8	13.2	45.7	182
	Bulkley-Nechako B	1,125	70.1	8.0	1.61	15.7	24.0	81.0	19.0	41.7	101
	Bulkley-Nechako C	805	62.9	9.9	0.88	21.5	31.4	81.9	18.1	42.1	289
	Sub-Total	46,455	68.5	10.2	3.34	6.3	22.3	79.6	20.4	43.6	6,282
SERSA		49,615	68.3	10.3	3.16	6.9	22.8	79.5	20.5	43.6	7,204

Note: (1) Includes Nak'azdli (Necoslie 1), Williams Prairie Meadow 1A, Sowchea 3, North Tacla Lake, Dzitline Lee 9, Tache 1, Binchie 2 (Pinchie 2),

Ye Koo Che 3, Burns Lake 18, Woyenne 27, Duncan Lake 2, Palling 1

Source: SC, 2013a; SC, 2013b

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9.1.2 Village of Fraser Lake

As of 2006, the Village of Fraser Lake had an active workforce of 600 people, representing 10% of the labour force in the LSA. In 2011, the workforce had reduced slightly to 585 people. Approximately 66.9% of adults in the community were working or looking for work, which was down from 68.6% in 2006, and there was relatively little unemployment (7.7%) compared to the SERSA (10.3%). The community is heavily reliant on natural resource development, with resource-based industries accounting for 29.3% of total employment. The two major employers consist of a forest products company and a mining company. As of the 2006 Census, logging and timber-related activities employed approximately 230 people in the community. In 2011, 85.6% of workers in Fraser Lake were employed full-time (this is much higher than the LSA average) and, on average, workers worked 45.8 weeks per year. In December 2012, there were 90 registered businesses in Fraser Lake, representing 10% of all businesses in the LSA.

The median incomes for families (\$84,568) and for individuals (\$30,185) in 2005 were the highest in the LSA and the SERSA. There was low reliance on income from government transfers (6.5%) and a low percentage of low-income households (69.3%). Between 2005 and 2009, average incomes in Fraser Lake dropped by 9%. Compared to the SERSA, residents of Fraser Lake had a relatively low level of educational attainment and 34.1% had not completed high school. A biomass project at the West Fraser Mill has been proposed (\$20 million); however, the timing of this upgrade is currently unknown.

The Village of Fraser Lake had municipal revenues of \$3.8 million in 2011 of which 68% came from taxation and grants. It reported expenditures of \$2.5 million, with spending on general government accounting for 30%. The majority of the assessment base (59%) consisted of major industry. The Village currently has the lowest tax rate on major industry in the SERSA.

9.1.3 Stony Creek 1 Indian Reserve

As of 2006, the Stony Creek 1 reserve had a labour force of 80 people, representing 1% of the labour force in the LSA. By 2011, this number had more than doubled to 165 people. However, the labour force participation rate in 2011 was very low, with 57.9% of adults in the community were employed or looking for work, and 48.5% were unemployed. The majority of adult residents of the Stony Creek 1 reserve (68.0%) were experienced in the service (non-basic) industries, with 32.0% having experience in "other service" industries. In 2011, 72.0% of workers on the Stony Creek 1 reserve were employed full time (this is lower than the LSA average) and, on average, workers worked 29.8 weeks per year, which is well below the LSA average (42.8 weeks).

Based on information for 2005, the median family income (\$23,200) and median individual income (\$8,112) were much lower than the average median incomes in the LSA and the SERSA. Female workers reported higher earnings than male workers did. Adults on the



Stony Creek 1 reserve had low levels of educational attainment. In 2011, 62.5% had not completed high school.

9.1.4 Nautley (Fort Fraser) 1 Indian Reserve

The Nautley (Fort Fraser) 1 Reserve had a labour force of 70 people in 2006, which decreased to 35 workers in 2011. In 2011, only 22.6% of adults in the community were employed or looking for work (down from 60.9% in 2006) and there was reported to be no unemployment. One-third of the workforce had experience in mining and quarrying industries, another third were experienced in manufacturing industries, and the other third were experienced in the "other services" industry. In 2011, 71.4% of workers on the Nautley (Fort Fraser) 1 reserve were employed full-time (this is lower than the LSA average) and, on average, workers worked 44.5 weeks per year, which is higher than the LSA average. Income data from the 2006 census were not available. Adults on the Nautley (Fort Fraser) 1 reserve had the lowest level of education attainment in the SERSA, and 62.5% had not completed high school.

9.1.5 Stellaquo (Stella) 1 Indian Reserve

The Stellaquo (Stella) 1 reserve had a labour force of 75 people in 2006, which increased to 110 in 2011. The labour force participation rate in 2011 was 68.8% (up from 55.6% in 2006). The community had a relatively high rate of unemployment (22.7%), although this is relatively low when compared to other reserves in the LSA. The majority of the labour force had experience in basic industries, with 37.8% experienced in agriculture and resources-based industries and 15.8% with experience in manufacturing. In 2011, 85.0% of workers on the Stellaquo (Stella) 1 reserve were employed full-time (this is much higher than the LSA average) and, on average, workers worked 38.6 weeks per year, which is less than the LSA average. Information on income for this community from the 2006 census is not available. Adults in this community had a low level of educational attainment, and 42.4% had not completed high school.

9.1.6 Kluskus 1 and Sandyman's Meadow 3 Reserves

The Kluskus 1 and Sandyman's Meadow 3 reserves belong to the Lhoosk'uz First Nation. There is no 2006 census or 2011 NHS information describing labour force or economic conditions in these communities. Information specific to these reserves can be found in **Section 14** of this report.

9.1.7 Euchinico Creek 17, Trout Lake Alex 16 and Nazco 20 Reserves

The Euchinico Creek 17, Trout Lake Alex 16 and Nazco 20 reserves belong to the Nazko First Nation. There is no 2006 census or 2011 NHS information describing labour force or



economic conditions in these communities. Information specific to these reserves can be found in **Section 14** of this report.

9.1.8 Bulkley-Nechako RDEA D

The Bulkley-Nechako RDEA D comprises the west portion of the LSA and contains rural populations surrounding the Village of Fraser Lake. In 2006, Bulkley-Nechako RDEA D had a labour force of 870 people, representing 15% of the labour force in the LSA. Because of the low response rate to the 2011 NHS, there is no 2011 economic information available for this area. Information for 2006 is provided instead. This rural population had a labour force participation rate (64.4%) in 2006 that was slightly lower than the LSA average, but a relatively higher rate of unemployment (12.6%). Approximately 60.4% of the workforce was experienced in basic industries, with 32.6% experienced in agriculture and other resource-based industries. As of December 2012, there were 71 registered businesses in this area, representing 8% of all businesses in the LSA.

The median household income in Bulkley-Nechako RDEA D (\$64,168) was slightly less than the average for the LSA, as was the median individual income (\$20,216). Transfer payments accounted for 14.9% of total income and 17.0% of households were considered to have low incomes; this is the highest of all the communities in the LSA for which data are available. Levels of educational attainment for adults in Bulkley-Nechako RDEA D were better than the LSA average in 2006, with only 22.3% not having completed high school.

9.1.9 Bulkley-Nechako RDEA F

The Bulkley-Nechako RDEA F comprises the east portion of the LSA and consists of the rural populations surrounding the District of Vanderhoof. In 2006, Bulkley-Nechako RDEA F had a labour force of 1,790 people, representing 31% of the labour force in the LSA. Because of the low response rate to the 2011 NHS, there is no 2011 economic information available for this area. Information for 2006 is provided instead. This rural population had the highest labour force participation rate in the LSA (73.7%) in 2006 and a relatively low rate of unemployment (7.0%). As of 2006, just over half of the labour force in Bulkley-Nechako RDEA F (52.4%) had experience in basic industries, with 28.4% experienced in agriculture and other resource-based industries. As of December 2012, there were 20 registered businesses in this area, representing 2% of all businesses in the LSA.

The median family income in Bulkley-Nechako RDEA F for 2005 was \$68,117, which was higher than the LSA average. Similarly, the median income for individuals (\$25,524) was also higher than the LSA average. Approximately 11.1% of annual incomes came from government transfers and 8.6% of households were considered to have low incomes. Levels of educational attainment for adults in the Bulkley-Nechako RDEA F were lower than the LSA average in 2006, and 32.9% had not completed high school.



9.1.10 Cariboo RDEA I

As there will be no direct road access from the Project to communities in Cariboo RDEA I, information on economic conditions in communities within Cariboo RDEA I has not been included in this baseline report. In 2011, the CRD reported expenditures of \$26.0 million. Major expenditures for the CRD included parks, recreation and culture (26.5% of the total), solid waste management and recycling (19.1%). protective services (12.1%), amortization costs (11.8%), and general government (10.6%).

9.1.11 City of Prince George

In 2006, the City of Prince George had an active workforce of 40,870 people, representing 87% of the labour force in the RSA and 77% of the labour force in the SERSA. By 2011, this number had decreased to 39,950 people, which was a loss of 920 people. In 2011, 69.0% of adults in the community were working or looking for work, which was down from 72.0% in 2006. The unemployment rate in Prince George (9.9%) was lower than in most other parts of the RSA. The City is the most economically diverse in the SERSA. In 2006, 77.3% of the labour force had experience in non-basic (service) industries, which increased to 79.0% in 2011. High percentages of the labour force were experienced in "other services" industries (20.6%), business services (16.93%), retail trade (12.7%), and health care and social services (12.4%). Only 5.4% of the labour force was experienced in agriculture- or resourcebased industries. In 2011, 77.9% of workers in Prince George were employed full-time (this is slightly lower than the RSA average) and, on average, workers worked 42.8 weeks per year, which is slightly lower than the RSA average. In December 2012, there were 5,336 registered businesses in this area, representing 85% of all businesses in the RSA. As of 2012, the Northern Health District and School District 57 were two of the largest employers in the City.

The median household income, as reported for 2005 (\$72,055), was higher than the RSA, as was the median individual income (\$27,670). Government transfers accounted for 10.1% of annual earnings and 14.7% of households were considered to have low incomes, which is slightly higher than the RSA average. Between 2005 and 2009, average incomes for residents of Prince George increased by 9%. Adult residents of Prince George had high levels of educational attainment, and 21.0% had not completed high school as of 2011. At present, eight major projects valued at \$904 million are currently underway in and around Prince George. Another four projects valued at \$473 million are on hold, and another nine projects have been proposed, with an estimated value of \$667 million for seven of these projects.

The City of Prince George had municipal revenues of \$163.2 million in 2011, of which 51% came from taxation and grants. Total expenditures in 2011 amounted to \$129.3 million, with protective services accounting for 29% of costs. Residential properties accounted for 77% of the tax assessment base in 2012.



9.1.12 District of Fort St. James

In 2006, the District of Fort St. James had an active workforce of 760 people, representing less than 2% of the labour force in the RSA. This number increased to 845 people in 2011. Approximately 64.7% of adults in the community were working or looking for work, which was down from 71.0% in 2006, and the rate of unemployment (11.0%) was slightly higher than in most other parts of the RSA. Just over half of the labour force (57.2%) was experienced in non-basic (service) industries; including the "other services" (18.4%) industries and retail trade (15.8%). Relatively large percentages of the labour force were experienced in manufacturing (27.6%). In 2011, 79.1% of workers in Fort St. James were employed full-time (this is nearly the same as the RSA average) and, on average, workers worked 43.7 weeks per year, which is also nearly the same as the RSA average. According to the Federal Business Registry (SC 20113b), there were no registered businesses in Fort St. James but this reflects incomplete registry data. Two of the largest employers are in the forest products industry but, since 2006, construction employment at the nearby Mt. Milligan Mine has provided new employment for residents of Fort St. James.

The median incomes for both families (\$80,486) and individuals (\$33,649) in Fort St. James were well above the average median income for the RSA. Transfer payments accounted for 9.0% of total incomes and only 5.8% of households were considered to have low incomes. Between 2005 and 2009, average incomes in Fort St. James decreased by 3%. Approximately 27.8% of adults in Fort St. James had not completed high levels of educational attainment as of 2011 and this is slightly higher than the RSA average (22.3%). Aside from construction of the Mt. Milligan Mine, which is scheduled to commence operation in 2014, one other major project is proposed for Fort St. James. This is a 40 MW biomass energy project valued at \$120 million, but the potential start-up date for construction of this project is unknown.

The District of Fort St. James had revenues of \$3.9 million in 2011, of which 42% came from taxation and grants. It spent \$3.7 million, with general government costs accounting for 31% of the total. In 2012, residential properties accounted for 74% of the municipal tax assessment base. Within the SERSA, the District has the highest tax rates for major industry and utilities.

9.1.13 Village of Burns Lake

In 2006, the Village of Burns Lake had an active workforce of 1,010 people, representing 2% of the labour force in the RSA. In 2011, the active labour force consisted of 995 people. Approximately 63.4% of adults in the community were working or looking for work, and this is nearly identical to conditions in 2006. However, the unemployment rate for Burns Lake was 12.1% in 2011, which represents a slight increase since 2006 (11.4%). The majority of the labour force (63.0%) was experienced in non-basic (service) industries, including "other services" (22.3%), and retail trade (11.4%). Relatively large percentages of the labour force were experienced in manufacturing (22.8%), which represents an increase since 2006



(17.8%). In 2011, 81.2% of workers in Burns Lake were employed full-time (this is higher than the RSA average) and, on average, workers worked 42.8 weeks per year, which is slightly below the RSA average. In December 2012, there were a reported 372 registered businesses in the area, representing 6% of all businesses in the RSA. The largest employer in the community is the RDBN. While forestry and mining provided some employment for community residents, this declined significantly in January 2012 after the fire at the Babine Forest Products mill that resulted in the loss of 300 jobs.

Based on 2005 data, the median incomes for families (\$50,268) and individuals (\$21,171) in Burns Lake were well below the average median income for the RSA. Residents of Burns Lake had a relatively high reliance on government transfer payments as a source of income (17.3%) and a high percentage of households (29.9%) were considered to have low incomes. Between 2005 and 2009, average incomes in Burns Lake increased by 5%. Approximately 27.6% of adults in Burns Lake had not completed high school as of 2011, which is slightly higher than the RSA average (22.3%). There are no major projects currently under construction in the Burns Lake area, but three have been proposed. These include replacement of the Babine sawmill by early 2014 (\$100 million), replacement of the existing hospital facility (\$55 million) that is proposed to be completed by summer 2015, and the Cheslatta Green Energy Project (\$46 million)that does not have a defined commencement date. A fourth major project, the Ditni Yoh Green Energy Project (\$140 million), is currently on hold.

The Village of Burns Lake had net municipal revenues of \$1.4 million in 2011, which included revenues of \$4.1 million and a declared loss of \$2.7 million. Approximately 42% of the pre-loss revenues came from taxation and grants. Municipal spending in 2011 amounted to \$3.5 million, of which 22% was spent on general government expenses and 19% on transportation and transit. Residential properties account for 68% of the municipal tax assessment base. The tax base that feeds the operating budget comes from residential and business. Within the SERSA, the Village has the highest rates of taxation on light industry and residential properties.

9.1.14 Fraser-Fort George RDEA C

The Fraser-Fort George RDEA C is located in the eastern portion of the RSA study area and includes the rural area southwest of the City of Prince George. In 2006, Fraser-Fort George RDEA C had an active workforce of 1,930 people, representing 4% of the labour force in the RSA. By 2011, the labour force had increased to 2,090 people. Approximately 72.6% of adults in the RDEA were working or looking for work, which is slightly lower than in 2006 (73.8%). The RDEA had an unemployment rate of 9.8% in 2011, which represents an increase from 2006 (7.3%). The majority of the labour force (72.4%) was experienced in non-basic (service) industries, including "other services" (25.4%), retail trade (13.0%), and health care and social services (10.8%) industries. In 2011, 86.8% of workers in Fraser-Fort Gear RDEA C were employed full-time (this is higher than the RSA average) and, on average, workers worked 45.7 weeks per year, which is also higher than the RSA average.



In December 2012, there were a reported 182 registered businesses in the area, representing 3% of all businesses in the RSA.

The median family income (\$79,871) and the median individual income (\$33,474) in Fraser-Fort George RDEA C in 2005 were amongst the highest in the RSA. Residents of this RDEA were the least reliant on income from government transfers (6.5% of income) and had a relatively low percentage of low-income households (6.4%). Adults in Fraser-Fort George RDEA C had some of the highest levels of educational attainment, with only 20.2% not having completed high school.

9.1.15 Bulkley-Nechako RDEA B

The Bulkley-Nechako RDEA B is located in the western portion of the RSA and consists of the rural area surrounding the Village of Burns Lake. In 2006, Bulkley-Nechako RDEA B had an active workforce of 1,130 people, representing over 2% of the labour force in the RSA. The labour force was similar in 2011, with 1,125 people working or actively seeking work. Approximately 70.1% of adults in the RDEA were working or looking for work, representing a slight decline since 2006 (74.8%). In 2011, the RDEA had an unemployment rate of 8.0%, which is among the lowest in the RSA and SERSA, and represents a decrease in unemployment since 2006 (8.9%). More than half of the labour force (61.8%) was experienced in non-basic (service) industries, including "other services" (19.4%), business services (12.9%), and health care and social services (10.1%) industries. Relatively large percentages of the labour force were experienced in agriculture and other resource-based industries (15.7%) and manufacturing industries (12.7%). In 2011, 81.0% of workers in Bulkley-Nechako RDEA B were employed full-time (this is higher than the RSA average) and, on average, workers worked 41.7 weeks per year, which is was lower than the RSA average. In December 2012, there were a reported 101 registered businesses in the area, representing 2% of all businesses in the RSA.

Both the median family income (\$67,089) and the median individual income (\$28,034) in Bulkley-Nechako RDEA B in 2005 were above the RSA averages. RDEA residents had a relatively low reliance on income from transfer payments (8.2% of income) and a low percentage of low-income households (6.2% of households). The level of educational attainment for adult residents of Bulkley-Nechako RDEA B was slightly lower than the RSA average, and 24.0% had not completed high school.

9.1.16 Bulkley-Nechako RDEA C

Bulkley-Nechako RDEA C consists of the most northerly portion of the RSA and includes the rural areas near Fort St. James. In 2006, Bulkley-Nechako RDEA C had an active workforce of 735 people, representing less than 2% of the labour force in the RSA. By 2011, this number had increased to 805 people. Approximately 62.9% of adults in the RDEA were working or looking for work, representing a decrease from 2006 (68.4%). In 2011, the RDEA had an unemployment rate of 9.9%, which is better than the RSA average, and represents



an increase since 2006 (7.5%). Just over half of the labour force (53.3%) was experienced in basic industries, including 21.5% in agriculture and other resource-based industries and 22.2% in manufacturing industries. In 2011, 81.9% of workers in Bulkley-Nechako RDEA C were employed full-time (this is higher than the RSA average) and, on average, workers worked 42.1 weeks per year, which was lower than the RSA average. In December 2012, there were a reported 289 registered businesses in the area, representing 5% of all businesses in the RSA.

The median household income (\$82,633) in Bulkley-Nechako RDEA C in 2005 was the highest in the RSA and the median individual income (\$32,134) was the second highest. Residents of Bulkley-Nechako RDEA C had a low reliance on income from government transfers (8.8% of total income) and had the lowest percentage of low-income households in the RSA (5.5% of households). Adults in Bulkley-Nechako RDEA C had a relatively low level of educational attainment, and 31.4% had not completed high school.

9.1.17 Indian Reserves in the RSA

There are a number of populated reserves that fall within the RSA, including: Nak'azdli (Necoslie) 1 reserve, Sowchea 3 reserve, William Prairie Meadow 1A reserve, North Tacla Lake reserve, Dzitline Lee 9 reserve, Tache 1 reserve, Binchie 2 (Pinchie 2) reserve, Ye Koo Che 3 reserve, Burns Lake 18 reserve, Woyenne 27 reserve, Duncan Lake 2 reserve, and the Palling 1 reserve. Many of these communities are quite small and it is unlikely that potential Project effects can be identified for individual reserves within the RSA. A summary of baseline economic information for all reserves in combination is provided below.

Available 2006 census information for these reserves indicates that, collectively, they had an active workforce of 635 people, representing over 1% of the labour force in the RSA. By 2011, the collective workforce had risen to 675 people. In 2011, 52.5% of adults on these reserves were working or looking for work, representing a slight increase in the labour force participation rates since 2006 (50.4%). The unemployment rate for Aboriginal people living on reserves was 34.1%, representing an increase since 2006 (29.1%). Nearly two-thirds of the labour force (64.4%) was experienced in non-basic industries, including 36.7% in the "other services" industry. Another 15.6% were experienced in agriculture and other resource-based industries and 17.8% were experience in manufacturing industries. In 2011, 90.7% of workers on reserves in the RSA were employed full-time (this is the highest in the entire SERSA). Workers worked slightly less than the RSA average, averaging 38.6 weeks per year.

In 2005, the average median family income for people living on reserves in the RSA was \$31,062, which is approximately 44% of the average median family income in the RSA. For individuals, the average median income on the reserves was \$9,767, which was 38% of the average median income for the RSA. Residents on reserves were highly reliant on income from government transfers (23.8% of income). Adults living on reserves in the RSA had the lowest levels of educational attainment in the SERSA, and 58.9% had not completed high school.



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- Romeo, M. Visitor Services Coordinator, Fort St. James Chamber of Commerce. Telephone Interview. July 2013
- Ragsdale, J. Economic Development Officer, Village of Burns Lake. Telephone Interview. June 2012.
- Siemens, S. Services Coordinator, Vanderhoof Chamber of Commerce. Telephone interview. July 2013.
- Wall, S. Manager, Burns Lake Chamber of Commerce. Telephone interview. July 2013.
- Worthing, S. Chief Administrative Officer, Village of Burns Lake. Meeting. July 2012.