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Minto Explorations Ltd.

Minto Phase V/VI Socio-economic Study

Socio-economic Study Report

June 2013
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Appendix I Approach to Primary Data Collection
Appendix II Summary Table of SFN Input and VSECs

TERMS, ACRONYMS, AND ABBREVIATIONS

Average Daily Traffic	ADT
Average Summer Daily Traffic	ASDT
Bank Cubic Metre	BCM
British Columbia	BC
Capstone Mining Corp.	Capstone
Community Well-being	CWB
Cumulative Effects Assessment	CEA
Designated Office	DO
Employment Insurance	EI
Emergency Medical Services	EMS
Integrated Community Sustainability Plan	ICSP
Interview	INT
Hectares	Ha
Klohn Crippen Berger	KCB
Kilometer	km
Limited	Ltd.
Local Study Area	LSA
Meter	m
Minto Explorations Ltd.	Minto
Minto Mine	Mine
National Address Database	NAD
No date	N.D.
Phase V/VI expansion	The Project
Recreational Vehicle	RV
Regional Study Area	RSA
Royal Canadian Mounted Police	RCMP
Selkirk Development Corporation	SDC
SEA	Socio-economic effects assessment
Selkirk First Nation	SFN
The Minto Mine Phase V/VI Socio-economic Study	The Study
Tonne per day	t/d
Trophy Stone Outfitting	TSO
United States	U.S.
Universal Transverse Mercator	UTM
Valued Socio-economic Component	VSEC
Waste Rock Dump	WRD
Year	Yr
Yukon Bureau of Statistics	YBOS
Yukon Environmental and Socio-economic Assessment Act	YESAA
Yukon Environmental and Socio-economic Assessment Board	YESAB
Yukon Territory	YT
Yukon Territory Government	YG

ACKNOWLEDGEMENTS

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The authors of this Study would like to acknowledge and thank the Selkirk First Nation for welcoming the study research team into their community and engaging with them throughout the course of the Study. The authors would also like to acknowledge and thank all study participants who shared their time and contributions.

1 INTRODUCTION

Minto Explorations Ltd. (Minto), a wholly owned subsidiary of Capstone Mining Corp., owns and operates the Minto Mine (mine) located on Selkirk First Nation (SFN) Class A Settlement Land, Parcel R-6A. Centered at approximately NAD 83, UTM Zone 8 coordinates 6,945,000 m N, 385,000 m E, the 3,750 tonne per day (t/d) copper-gold mine began operating in 2007 and has since been expanded twice, increasing throughput by more than 100%. The mine is currently in Phase IV of operations and Minto is proposing to extend the mine life with its Phase V/VI expansion (Project). Activities related to the Project trigger an assessment under the Yukon Environmental and Socio-economic Assessment Act (YESAA) at the Designated Office (DO) level.

Minto retained Klohn Crippen Berger (KCB) to work with the SFN to produce the confidential Minto *SFN Traditional Knowledge Study* report (KCB 2011), which focuses on the Traditional Knowledge components of the YESAA proposal[1]. This report presents the socio-economic components of the YESAA proposal. The Socio-economic Study builds on previous studies conducted for the Minto Mine including: the *Socioeconomic Description and Impact Assessment Report* (Hallam Knight Piesold Ltd. 1994), the *Minto Explorations Ltd. Project Proposal Phase IV Mine Expansion* (November 2010), and the Minto *SFN Traditional Knowledge Study* Report (KCB 2011). The Socio-economic Study also considered and incorporated wherever possible, comments received from the SFN leadership and council, the SFN community, the tripartite Socio-economic Working Group, and the Yukon Environmental and Socio-economic Assessment Board (YESAB) related to the previous and current socio-economic studies.

1.1 Project Overview

The mine is located 240 kilometers (km) northwest of Whitehorse on the west side of the Yukon River. Minto and Pelly Crossing are the closest communities to the mine site. The Klondike Highway is the main transportation corridor for the mine and facilitates the transport of concentrate to port in Skagway, Alaska year-round, with the exception of the four to six week winter “freeze-up” and spring “break-up” periods on the Yukon River. The mine is accessed from the Klondike Highway via the Minto Landing on the east side of the Yukon River from where Minto operates a barge crossing during the summer and constructs an ice bridge during the winter.

The proposed Project is an expansion of existing activities at the mine site, in direct proximity to previously disturbed and other active exploration areas, with increased emphasis on underground mining. Minto estimates that approximately 82.04 ha of additional land will be cleared as a result of the Project. The Project description used as the basis for the Study is summarized in Table 1.1 and the proposed Project area is shown in Figure 1.1.

[1] Please note that the confidential Minto *SFN Traditional Knowledge Study* (KCB 2011) is not publically available and is owned by SFN and its contributors.

Table 1.1 Project Description Overview

Component	Activity Description
Open Pit Mining	Mining of Phase V/VI pits (Area 2 Stage 3, Minto North, Ridgetop North, and Ridgetop South) using conventional surface mining methods and an expanded network (2.3km) of new roads to accommodate mining activities. Mining at a rate of 12,800 bank cubic meters (BCM)/day followed by a decrease to 7,200 BCM/day after the completion of the existing pit. Extension of open-pit mining to Q2-2017.
Underground Mining	Expanding the "Minto South Underground" using conventional underground mining methods and mining of a new "Wildfire Underground" which will be accessed through a new decline. Extension of underground mining to Q4-2019.
Mill	Milling of stockpiled ore to Q2-2022. Concentrate hauled to Skagway, Alaska via the Klondike Highway.
Waste Rock and Overburden Management	Cessation of waste rock segregation based on copper grade and adoption of material dispatching based on on-site assessments of acid-generating potential. Filling the completed Area 118 pit with overburden.
Waste Rock Dumps (WRDs)	Creation of a two new WRDs. The main WRD, "Main Pit Dump," is located within the footprint of the mined-out Main Pit, and the "Ridgetop Dump" is located to the west of the Ridgetop North and Ridgetop South pits.
Tailings Management	The potential expansions of the current Mill Valley Fill to further stabilize the dry stack tailings storage facility. Expanded use of the Main Pit and Area 2 pits and the new use of the Ridgetop pit as storage locations for slurry tailings from milling.
Infrastructure and handling areas	Dewatering infrastructure, laydown, and waste/ore handling areas.
Surface Water Diversions	Minor realignments of surface water diversions and upgrades to existing diversions.
Installation of services	Installation of services such as drill water and dewatering pipes, electrical cable, heating, and ventilation ducting in the underground workings.
Closure and reclamation	Closure and reclamation of all Project components following completion of mining and milling.

Source: Data received from Minto.

No changes are planned for the following components apart from the duration of their use; therefore, they are not included in the scope of the current assessment:

- fuel handling/storage and electrical power supply;
- water storage dam, explosives facilities, barge landings or access roads;
- footprint of the mill facilities;
- traffic to and from site;
- chemicals used and stored on site;
- blasting frequencies and explosives use associated with surface and underground mining; nor
- closure of currently authorized facilities/Project components.

1.2 Socio-economic Study Overview

As noted above, the Study was undertaken as a component of the YESAA Proposal. This section identifies the Study's objectives, background, and the project team.

1.2.1 Study Objectives

This Study was comprised of three components that collectively fulfill the YESAA requirements for the socio-economic studies. These are the baseline, the socio-economic effects assessment (SEA), and the cumulative effects assessment (CEA). The key objectives of each component are identified below:

- Socio-economic baseline:
  - To document the existing socio-economic conditions in the local study area (LSA) and regional study area (RSA) that may be directly or indirectly affected by the Project.
  - To identify potential valued socio-economic components (VSECs) that reflect LSA and RSA values and concerns.
- SEA:
  - To identify, assess, and characterize potential Project effects on the VSECs in the LSA and/or RSA.
  - To identify existing or potential mitigation and enhancement measures. Where potential residual effects were identified, mitigation measures were reviewed to determine if it was possible to further reduce potential residual effects.
  - To identify and characterize potential residual effects.
- Cumulative Effects Assessment:
  - To determine whether residual effects of other projects and activities, in conjunction with those from the Project, may result in cumulative effects.
  - To identify, assess, and characterize any potential socio-economic cumulative effects.

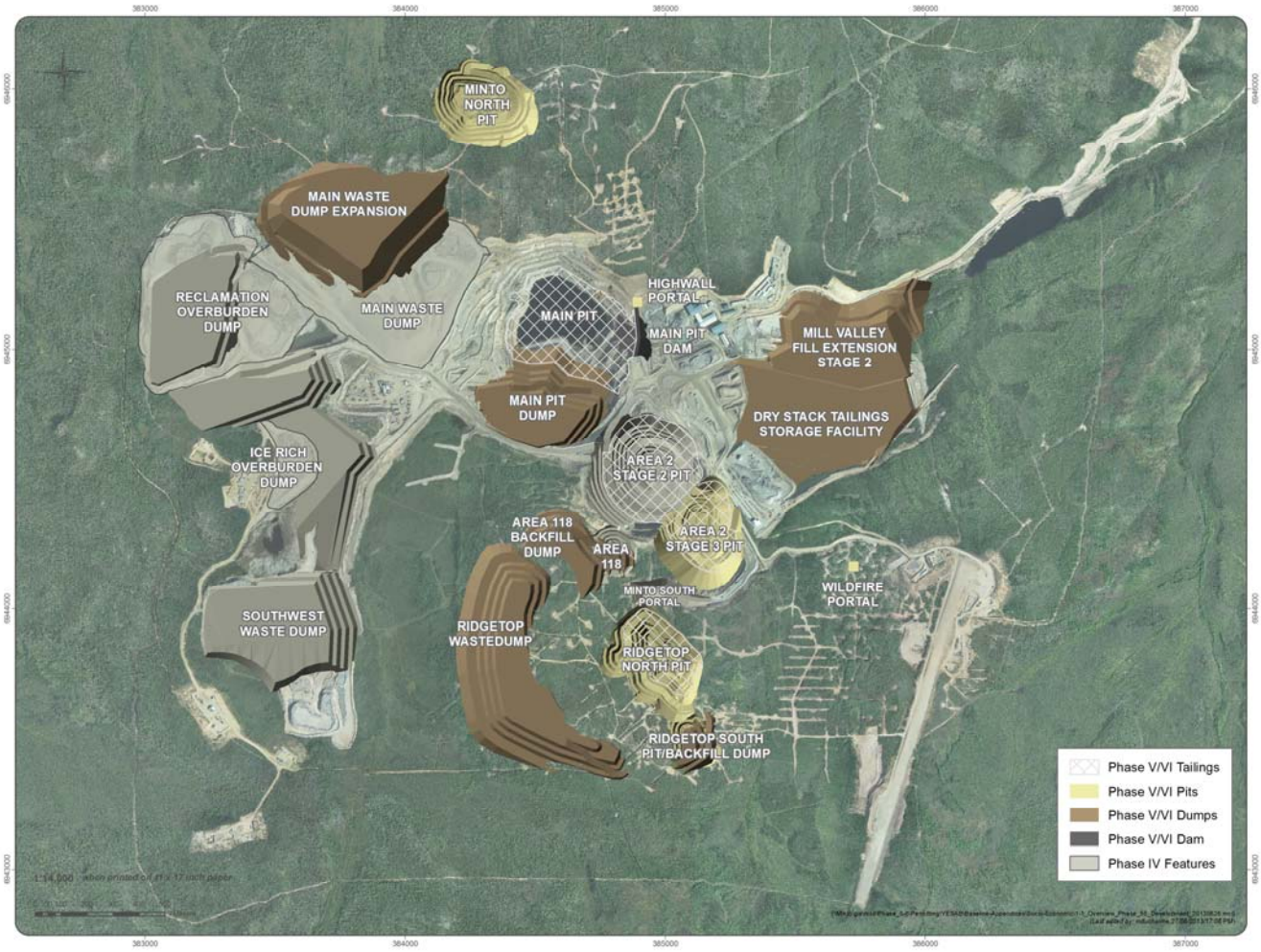

Figure 1.1 Minto Mine Phase V/VI Expansion Area

In addition to the above objectives, an overarching objective of the Study was to work in partnership with the SFN leadership and community to develop a respectful, community-based socio-economic study that facilitated meaningful engagement opportunities and culturally appropriate social science research methods.

It should be noted that when this Study was initiated in late 2010, Minto was planning for the proposed Phase V expansion activities; thus the Study was originally known as the "Minto Mine Phase V Socio-economic Study". During the course of that study, Minto revised their plans to include Phase VI, which resulted in the name change to the "Minto Phase V/VI Socio-economic Study"[2].

[2] Please note that early study materials reflect the original study name.

Furthermore, in an effort to increase comprehension in community communications, numeric numbers were used in place of the roman numerals; therefore, throughout this document, and in any study communication materials, the term “Phase 5/6” is synonymous with “Phase V/VI”.

1.2.2 Socio-economic Study Team

The Socio-economic Study team was comprised of: the research team, project partners and key contacts, and the tripartite Socio-economic Working Group. A brief description of the Study team is provided below.

1.2.2.1 Research Team

The research team consisted of three KCB researchers, Minto representatives, and the SFN community researcher. Minto representatives attended community meetings and activities, wherever possible, to provide information about the Proposal and to support study activities. The SFN community researcher provided invaluable organizational and design support by introducing KCB researchers to SFN citizens, accompanying KCB researchers to interviews and data collection events, and helping coordinate activities, events and communications with study participants. She also worked with the research team to conduct research and perform data checks throughout the early stages of this report.

1.2.2.2 Project Partners and Key Contacts

Project partners and key contacts advised the study’s development. These included: SFN Elders, SFN citizens, SFN family representatives, Pelly Crossing service providers, government agencies, local land users, SFN trapline holders, local Resource Council members, and Minto residents. In total 33 project partners and key contacts participated in the Study, of which 22 were SFN citizens (including Elders, citizens, family representatives, trapline holders, and SFN service providers/government agencies).

1.2.2.3 Tripartite Socio-economic Working Group

The tripartite Socio-economic Working Group is comprised of representatives of the SFN, Minto and the Yukon Territorial Government (YG). The three parties agreed in early 2011 to work collaboratively in the design and implementation of a socio-economic effects monitoring program for the mine. The parties also agreed on the need for a broader cumulative effects monitoring program to be led by the SFN and the YG with contributions from Minto. These commitments arose from the YESAB screening of Minto’s Phase IV expansion proposal and the SFN and YG decision documents.

Tripartite Socio-economic Working Group members were consulted periodically to discuss the Project, study methodology and findings, and potential opportunities to work together to achieve shared goals. The SFN representatives on the tripartite Socio-economic Working Group were a conduit for communications between the researchers and the SFN Chief and Council. Furthermore, the SFN representatives provided input and feedback about the Study, which was incorporated where possible. This includes consideration of the tripartite Socio-economic Working Group’s *Minto Mine Socio- economic Monitoring Program* draft document (Northwest Resources Consulting Group n.d.), and ongoing engagement with the SFN community throughout the Study.

1.3 Study Area Overview

1.3.1 Spatial Boundaries

To focus the socio-economic assessment, a RSA and a LSA were defined to reflect those areas in Yukon that may experience direct and/or indirect socio-economic effects as a result of the Project. An overview of the RSA and LSA is provided in the following sub-sections.

1.3.1.1 Regional Study Area

The RSA was defined as Yukon, as certain project-related benefits (e.g., employment, etc.) accrue to the entire territory; however, specific emphasis was placed on communities along the Klondike Highway between the mine and the Yukon/BC border (i.e., Carmacks, Braeburn, Whitehorse, Carcross). This is due to the fact that the main access route to the site is via the Klondike Highway and that the majority of workers transit Whitehorse on their way to and from the site (Figure 1.2).

1.3.1.2 Local Study Area

The LSA was defined according to the area(s), communities, and/or individual(s) whose property, community, and/or traditional territory is directly influenced by the mine footprint or accessory project activities, including those located in Minto Landing (Figure 1.3). The LSA, which is wholly within the SFN traditional territory, includes:

- **SFN**: The Minto Mine is located on SFN Category A Settlement Land, as well as within the SFN traditional territory.
- **Pelly Crossing**: Pelly Crossing is the administrative center of the SFN and is also the closest service center to the mine site.
- **Minto, including Minto Landing**: Minto is located on the east side of the Yukon River and includes Minto Landing where the barge and ice bridge used to cross the Yukon River to access the mine site are located.
- **Minto Mine**: The Minto Mine site includes existing mine infrastructure, and proposed infrastructure and activities described in the Phase V/VI YESAB proposal.
- **Registered Trapline Concessions #145 and #146**: The mine footprint and/or access road to site directly overlaps these trapline concessions.
- **Guide outfitting**: The two guide outfitting operations located within the immediate Project area are Registered Outfitting Concession #13 (Mervyn Outfitting) and Registered Outfitting Concession #14 (Trophy Stone Outfitting).

Additional detail regarding Minto, Pelly Crossing and the SFN is provided in Section 1.3.3. Additional detail on the resource users is provided in Section 3.12.2.

The CEA considered an expanded LSA spatial boundary to consider potential community effects within the SFN traditional territory. The expanded LSA spatial boundary was adapted for this assessment to increase certainty that all potential project effects and/or activities that may be experienced by the SFN and communities in the LSA would be considered.

1.3.2 Temporal Boundaries

1.3.2.1 Baseline

As this Project is an expansion of existing activities at the mine site, Phase IV project activities and effects are being used as baseline conditions. The temporal boundaries of baseline topics vary depending on data availability but generally cover the period from 2001 to 2013. To provide comparative data for specific baseline topics three data periods were considered wherever possible.

For some topics information is also presented from earlier periods where it was available and relevant. In terms of the mine, this Study considers Phase IV as the baseline condition with recognition that Phase IV would have proceeded through decommissioning and closure without the Project.

1.3.2.2 Socio-economic and Cumulative Effects Assessments

The temporal boundaries of the effects assessment are generally consistent with the timing of project activities (i.e., second quarter of 2014 to 2022 for operations, and 2023 to 2042 for decommissioning and closure). However, the temporal boundaries of certain VSECs may vary depending on the nature of the potential effect(s) and residual effects identified.

As Phase IV is being used as the baseline for this SEA, the effects of Phase V/VI activities are being compared to Phase IV baseline conditions. This is the case for both the Operations and for the Decommissioning and Closure phases of the Project.

To be clear, this Project is not using pre-mining conditions as a baseline for the effects assessment. However, both Minto and SFN have a desire to better understand the cumulative effects of all phases of the Minto Mine project and therefore Minto is committed to contributing to the cumulative effects monitoring program that SFN and the YG are developing.

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7,800,000 7,600,000 7,400,000 7,200,000 7,000,000 6,800,000 6,600,000

N

ALASKA

NUNAVUT

NORTHWEST TERRITORIES

YUKON TERRITORY

BRITISH-COLUMBIA

Great Bear Lake

Great Bear River

Mackenzie River

Dempter Highway

Klondike Highway

Robert Campbell Highway

Alaska Highway

Yukon River

Pelly Crossing

Minto

Carmacks

Braeburn

Whitehorse

Carcross

LEGEND

- Minto Mine
- Local Study Area Towns
- Regional Study Area Towns
- Major Highways
- Major Rivers
- Regional Study Area
- Major Lakes

Notes:
1. Projection: UTM8N, NAD83
2. Roads:Natural Resources Canada, Earth Sciences Sector, 1:1,000,000
2. Additional base data: ESRI

0 250 km

TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED _____

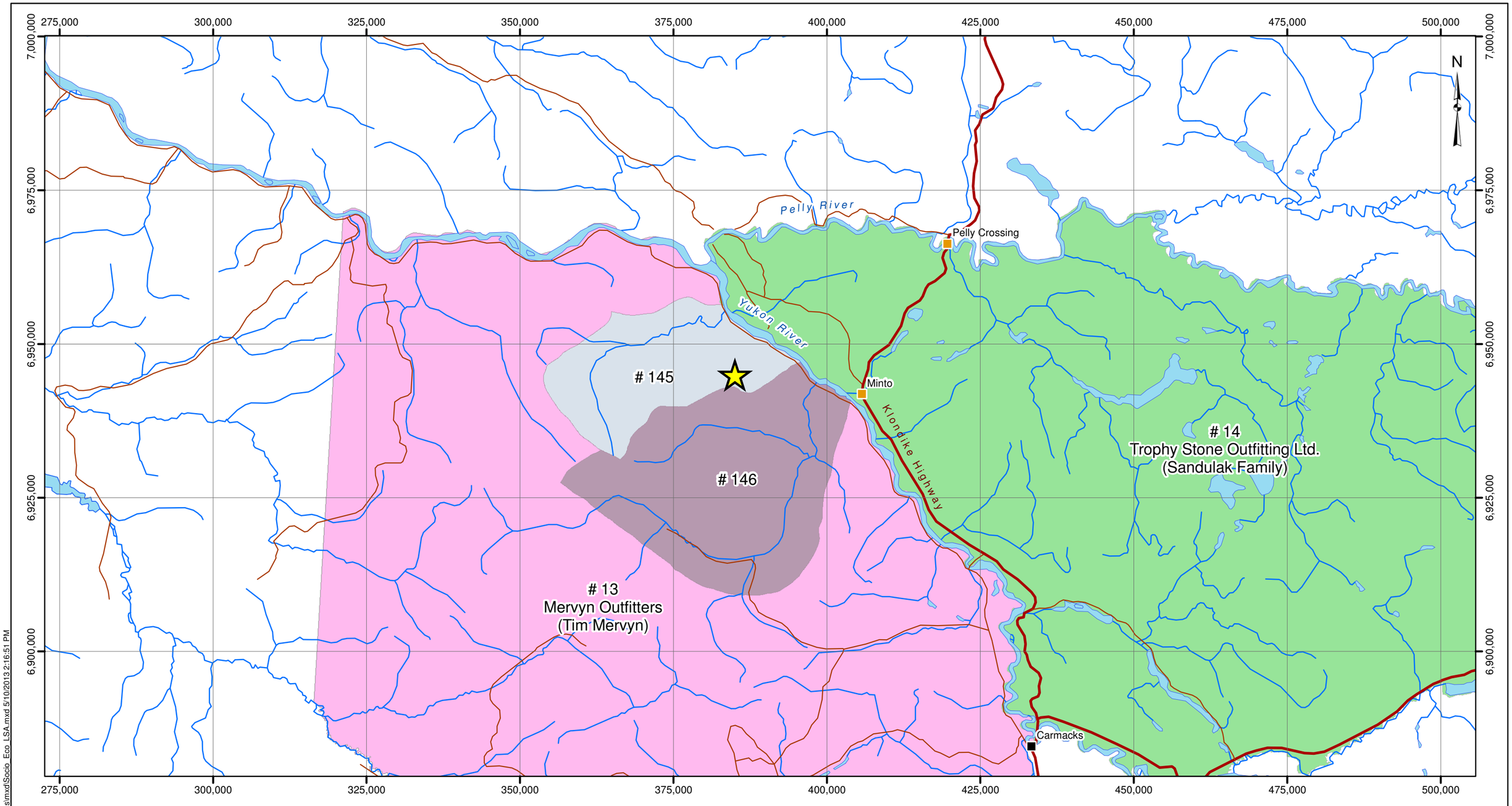
CLIENT
CAPSTONE MINING CORP.
Klohn Crippen Berger

PROJECT
MINTO SOCIO-ECONOMIC STUDY

TITLE
SOCIO-ECONOMIC REGIONAL AND LOCAL STUDY AREAS

PROJECT No. M0963802

FIG No. 1.2



LEGEND

- Minto Mine
- Local Study Area Towns
- Regional Study Area Towns
- Primary Highway
- Road
- River
- Waterbody
- Outfitting Concession # 13
- Outfitting Concession # 14
- Trapping Concession # 145
- Trapping Concession # 146

Notes:
1. UTM Zone 8N, NAD83
2. Base data from Yukon Government (1:1,000,000)
3. Concessions from Yukon Government (1:250,000)

0 25 km

TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED _____

CLIENT: CAPSTONE MINING CORP.

Klohn Crippen Berger

PROJECT: MINTO SOCIO-ECONOMIC STUDY

TITLE: SOCIO-ECONOMIC LOCAL STUDY AREA

PROJECT No. M09638A01

FIG No. 1.3

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1.3.3 The SFN and Local Study Area Communities

1.3.3.1 Minto, Lhútsäw Dachäk

Minto is the approximately 20 km to 25 km stretch of the Klondike Highway extending between McCabe Creek and the Ingersoll Islands located between the villages of Carmacks and Pelly Crossing (Greer 1994). This area is home to businesses (i.e., the Minto Resort and the McCabe Farm), the mine access road and barge landing, the SFN general assembly grounds, and a few private residences used by both seasonal and year-round occupants.

The Minto area is an important area of traditional land use and cultural significance to the SFN, who have occupied and used the area for thousands of years. Known as *Lhútsäw Dachäk* in the traditional Northern Tutchone language of the SFN, Minto was the center of the SFN community as recently as the 1950s before the SFN relocated to Pelly Crossing (Greer 1994).

1.3.3.2 Pelly Crossing

Pelly Crossing is located 35 km east of Minto Landing and has been occupied by the SFN long before the Europeans arrived and before the first permanent building was established in 1914 by Ira van Bibber. Traditionally, Pelly Crossing was a spring fish camp location where whitefish and grayling were harvested. Later in the nineteenth century, the Pelly River ferry crossing (as part of the Whitehorse-Dawson Highway) was located in the area of the current Pelly Crossing community. Once the Klondike Highway was complete in the mid-1950's, SFN citizens were encouraged by new government policies and programs to relocate from the Minto area to Pelly Crossing. Pelly Crossing is currently the administrative center of the SFN, and the estimated 327 residents who comprised the community in September 2012, are predominantly SFN citizens and service workers (Government of Yukon 2012).

As Pelly Crossing is not an incorporated municipality, service delivery is shared between the Yukon and SFN governments. There is no municipal council or local Advisory Committee that operates in the Pelly Crossing area, but the SFN Renewable Resource Council does (Inukshuk Planning and Development 2007).

1.3.3.3 SFN, Ts'eke'Huch'an

The mine is located on SFN Category A Settlement Lands within the traditional territory of the SFN. The SFN, known as *Ts'eke'Huch'an* in their traditional language, adopted their English name from the nation's former headquarters at Fort Selkirk, Yukon, before subsequently settling in Minto and later in Pelly Crossing (Hallam Knight Piesold Ltd. 1994). The SFN have lived off of the land and resources of their traditional territory since time immemorial, according to oral history shared by Elders. Their traditional territory extends along the Yukon River from Minto to the mouth of the Selwyn River, west to the Dawson Range, east along the Pelly River to the MacMillan River drainage, and north to the Stewart River. The SFN traditional lifestyle was intimately related to the Yukon's northern forest and the seasonal round (Hallam Knight Piesold Ltd. 1994). Though the SFN has evolved through time, the Nation is still rich with the culture and traditions passed down from generation to generation through oral history, and their culture continues to shape the SFN community today.

The SFN has been a self-governing nation since 1997 and is governed by an elected Chief, four Councillors, and two Elders. The Councillors equally represent the Nation's two clans, the Crow Clan and the Wolf Clan, with two Councillors from each clan respectively. The positions of the two Elders are the "Principal Elder" and the "Elder on Council". The most recent SFN election was held on March 30, 2011.

Table 1.2 SFN Chief and Council

Name	Position	Contact Information	Date Elected
Kevin McGinty	Chief	chief@selkirkfn.com	03/30/2011
Milly Johnson	Crow Councillor	johnsonm@selkirkfn.com	03/30/2011
Roger Alfred	Crow Councillor	alfredr@selkirkfn.com	03/30/2011
Lori Sims	Wolf Councillor	simsl@selkirkfn.com	03/30/2011
Jeremy Harper	Wolf Councillor	harperj@selkirkfn.com	03/30/2011
Jean VanBibber	Principal Elder		
Annabell Vance-Kurenoff	Elder on Council		

Source: T.L. Isaac, personal communication, December 14, 2012

2 METHODOLOGY

2.1 Overview

Study methodology was generally based on the YESAB *Guide to Socio-economic Effects Assessments* (YESAB 2006), and iteratively developed with the SFN community and the tripartite Socio-economic Working Group. The Study's methodological framework was presented during community meetings and was used to guide study development (Figure 2.1). This framework was adapted throughout the course of the study in consideration of study developments and progress. For more detail regarding about the Study's methodological framework and approach, please see Appendix I.

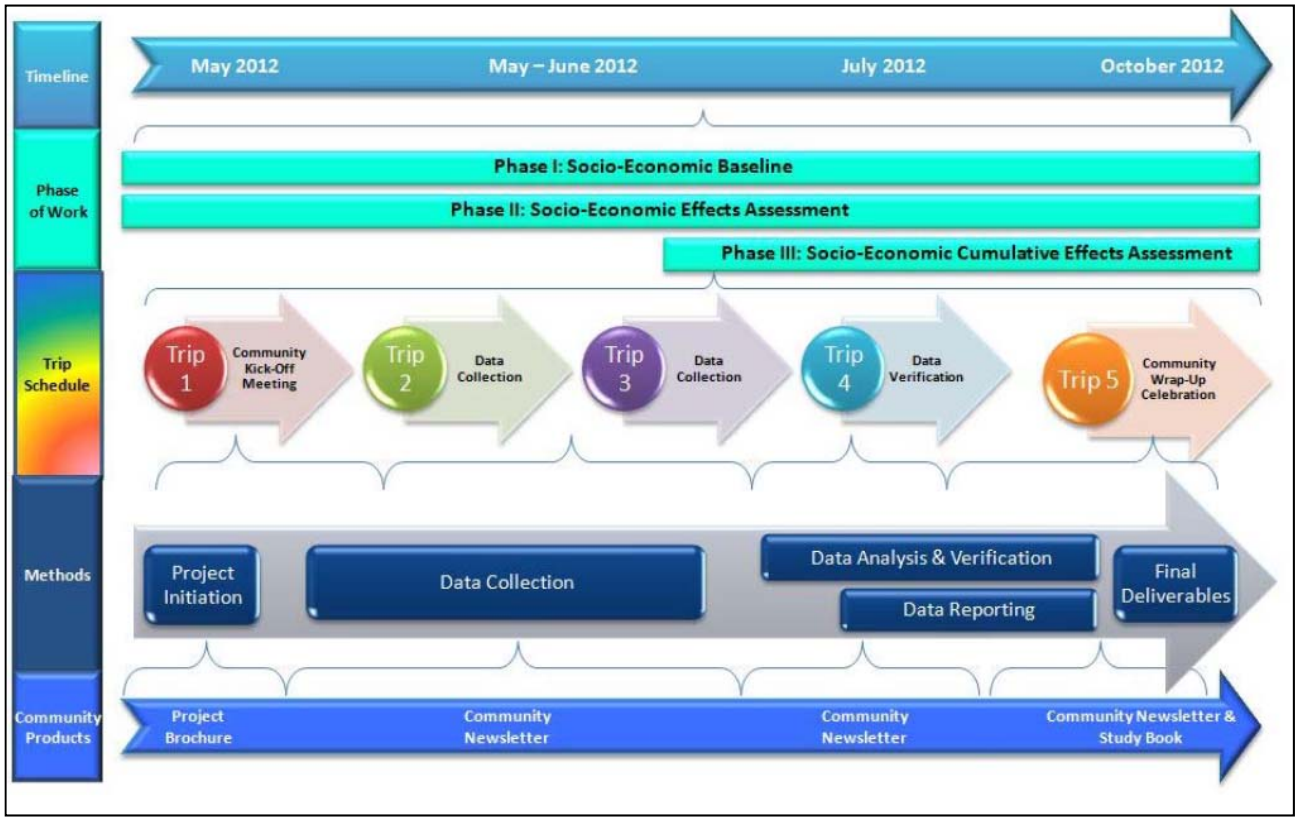


Figure 2.1 Socio-economic Study Methodological Framework

This Study considered theme areas, socio-economic conditions, valued socio-economic components (VSECs), indicators, and measures to establish an adaptable assessment framework that could be used in this Study, as well as for monitoring and assessments in the future. This Study focused on the first three levels of the framework. However, as this Study will inform not only the YESAA Proposal but also future socio-economic monitoring program(s) definitions of indicators and measures were provided to illustrate how this Study's data may contribute to future work (Figure 2.2).

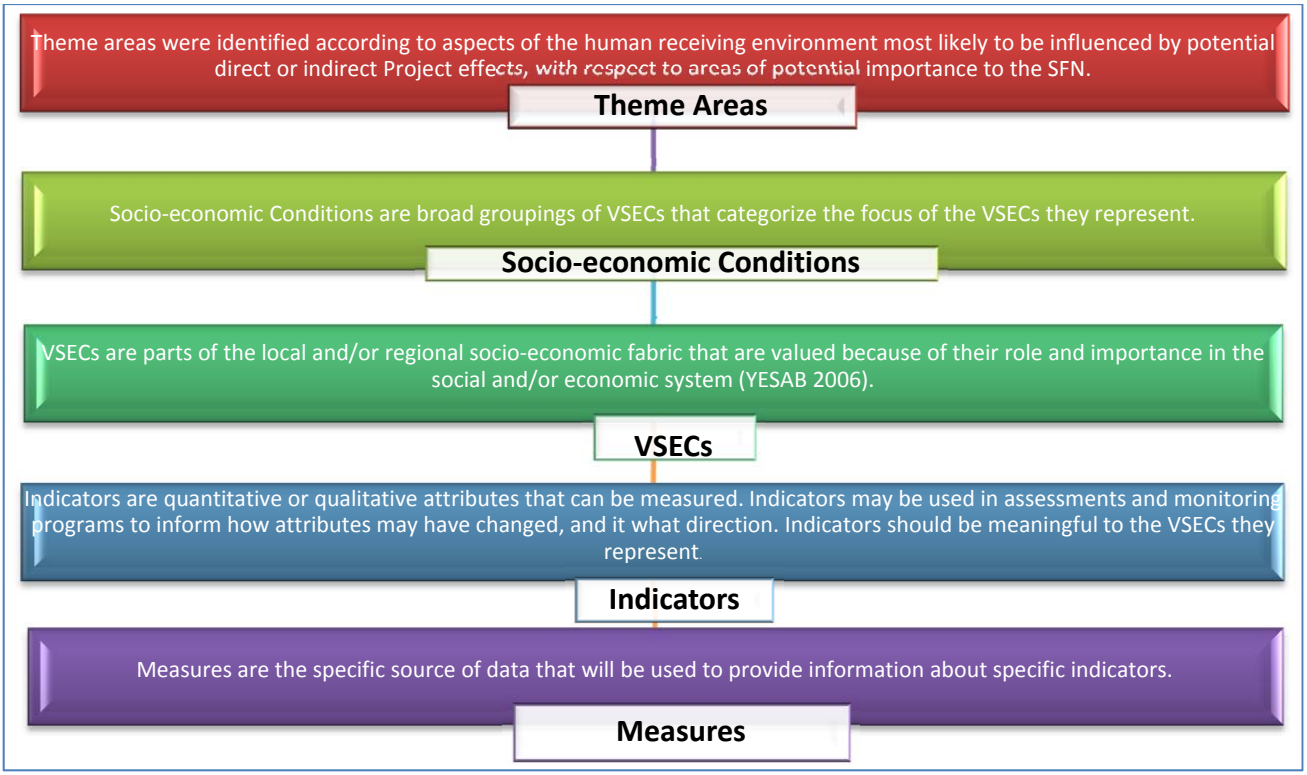


Figure 2.2 Hierarchical Structure and Definitions of Assessment Framework

2.2 Scoping and Valued Socio-economic Component Identification

2.2.1 Scoping

An initial scoping exercise was undertaken to:

- identify and prioritize the socio-economic conditions and VSECs important to the SFN and to the study;
- identify the information available from the Phase IV proposal (Minto Explorations Ltd. 2010), the Minto-SFN Traditional Knowledge Study (KCB 2011); and
- identify the additional information that would have to be gathered.

The intent of this scoping exercise was to help focus the study on the potential VSECs and, in particular, those where potential project effects could be identified.

2.2.2 VSEC Theme Areas

Theme areas were identified according to aspects of the human receiving environment most likely to be influenced by potential direct or indirect project effects. Theme areas were included if it was identified that potential VSECs within the theme area could be potentially affected by the proposed project due to the VSECs "integral connection to, or reflection of, the social-economic system; commercial or economic value; and/or, their role in maintaining quality of life in the community"

(YESAB 2006, p.36). Theme areas were further refined to identify socio-economic conditions as presented in Figure 2.2, and proposed in the Minto Mine Socio-economic Monitoring program.

Following the initial study scoping, a preliminary list of VSEC theme areas, or areas of potential importance to the SFN that could be potentially affected by the Project, was developed to facilitate discussion with the SFN about the items that were important to them and about how the Project could potentially affect those items. The preliminary list of theme areas was developed based on the experience of the Study research team, comments received from the SFN during the Phase IV Minto Mine proposal development and the Minto *SFN Traditional Knowledge Study* report (KCB 2011), and review of YESAA requirements.

It was recognized that the items presented as theme areas were not necessarily VSECs but were items identified as being important to the community and were the first step in tying the concept of VSECs to areas that are important the SFN and other interested parties. The preliminary list of theme areas was as follows:

- Business opportunities
- Dust
- Education and training
- Employment income
- Employment opportunities
- Noise
- SFN community growth
- SFN community justice and safety
- SFN community wellness
- SFN community economic vitality
- SFN Citizen economic vitality
- SFN political structure and leadership
- Traditional use activity
- Wilderness

2.2.3 VSEC Theme Area Refinement

The VSEC theme areas were presented to the SFN for discussion and review at a community meeting held on May 31, 2012 in Pelly Crossing and again at a community meeting held on August 14, 2012. Theme areas were refined after each meeting in consideration of community feedback received to reflect the values expressed by the community.

Four central discussions questions were used during community meetings to facilitate the refinement of VSEC theme areas and identification of VSECs:

- What do you value?
- How might these values be affected by the proposed Minto Mine Phase 5 Expansion, and why?
- How can potential positive effects be improved and potential negative effects be reduced or eliminated?
- If you have concerns, are they based on your own experience, other studies, or information passed on to you from someone else?

Responses to the above questions were recorded on posters during and after the community meeting and also verbally provided to the research team. Feedback received was reflected in the development of refined theme areas as well as in the identification of VSECs.

The list of refined theme areas developed after the August 14, 2012 meeting was as follows:

- Business opportunities
- Dust
- Education and training
- Your economic future
- SFN traditional economy
- Job opportunities
- Noise
- SFN community growth & economic sustainability
- SFN community justice and safety
- SFN community wellness
- SFN leadership and governance
- SFN Traditional Knowledge & traditional use activities
- SFN language and culture
- Fish, animals and wilderness

It is important to note that some of the "theme areas" did not translate directly into VSECs; however, they are encompassed in the VSECs identified in the following sub-section. For example, dust, noise, fish, animals and wilderness are considered in the socio-economic conditions of connections to land and water, material well-being, and community wellness and were also considered in the environmental impact assessment.

2.2.4 Identification of VSECs

Identification of the VSECs included consideration of the following:

- input received from the SFN during the development of the refined list of VSEC "theme areas" as well as values, concerns and comments shared during interviews and other community meetings (Appendix II);
- the VSECs described in the *Minto Mine Socio-economic Monitoring Program* (Northwest Resources Consulting, n.d.); and
- information gathered during the Minto *SFN Traditional Knowledge Study* Report (KCB 2011) and the Minto Mine Phase IV Proposal studies.

Consideration was given to the Northwest Resources Consulting (n.d.) draft document, to align the objectives of this Study with those of the tripartite Socio-economic Working Group and the development of their socio-economic monitoring program. The term "socio-economic conditions" and the conditions identified in the Northwest Resources Consulting (n.d.) draft document were carried forward to this Study to provide consistency with the monitoring program moving forward as the conditions identified encompassed the socio-economic priorities identified through discussions with the SFN.

Table 2.1 Socio-economic Conditions and Associated VSECs

Socio-economic Condition	VSEC	Scale[3]	Rationale
Material Well-being	Business Opportunities	RSA LSA	Potential for the Project to influence the type and level of business opportunities.
	Employment Opportunities	RSA LSA	Potential for the Project to influence employment opportunities.
	Employment Income	RSA LSA	Potential for the Project to influence employment income.
	Royalties and Donations	RSA LSA	Potential for the Project to influence royalties and donations to the SFN.
	Traditional Economy	LSA	Potential for the Project to influence participation in the traditional economy and the role of the traditional economy.
Population	Community Stability	RSA LSA	Potential for the Project to influence changes to community demographics (i.e., size, composition, and mobility) and, in turn, community stability.
	Housing	RSA LSA	Potential for Project-related population changes to influence housing demand and supply.
Health	Health Status and Services	LSA	Potential for the Project to influence community health and the type and level of health services provided.
Education and Capacity	Education and Training	LSA	Potential for the Project to affect demand for and availability of educational and training opportunities and the types of education provided and the influence this may have on capacity development.
Community Wellness	Community Well-being	LSA	Potential for the Project to influence community wellness and social cohesion.
	Cultural Well-being	LSA	Potential for the Project to influence the cultural values and activities (i.e. language, traditional use activities, etc.).
Connections to the Land and Water	Traditional and Current Use	LSA	Potential for the Project to influence activities/outcomes related to trapping, hunting and harvesting.
Sustainability	Intergenerational Equity	LSA	Potential for the Project and its' legacy to influence future generations.
	Minto-SFN Relationship	LSA	Potential to further develop the Minto-SFN relationship.

2.3 Baseline

Socio-economic baseline data was compiled through a data review of public and internal Minto data sources to describe the existing socio-economic setting in the LSA and RSA. This data was validated and/or supplemented through primary data collection (e.g., interviews, community meetings, etc.) wherever possible.

At the time the baseline was being developed, KCB researchers were aware of the broader work being done by the tripartite Socio-economic Working Group relative to a monitoring program for the mine. As a result, the baseline information presented in this report was prepared with a view to meeting not only the requirements of the socio-economic assessment for the Project but also to help inform other socio-economic conditions identified as being important to the SFN by the tripartite

[3] Please note that while it is recognized that SFN citizens do reside outside of the LSA, for the purposes of this report SFN related values, concerns and considerations are reflected as part of the LSA boundary as Pelly Crossing is the administrative center of the Nation.

Socio-economic Working Group as Minto is committed to working with the SFN on the monitoring program.

2.3.1 Literature Review

Several different types of data sources were consulted in the literature review, including: statistics, written social data, internal publications, and reports (YESAB 2006). Table 2.2 summarizes the data sources that were reviewed and relied upon for this Study.

Table 2.2 Existing Data Reviewed for this Study

Type	Reference
Minto Publications and Reports	Minto Explorations Ltd. 2012b. Minto Phase VI Preliminary Feasibility Study Technical Report (July 2012), Effective Date: January 1, 2012.
	Minto Explorations Ltd. 2010. Project Proposal, *Phase IV Mine Expansion,* Minto Mine, Yukon Territory (November 2010).
	Hallam Knight Piesold Ltd. 1994. Minto Project, Volume III: Socioeconomic Description and Impact Assessment.
	SRK Consulting. 2011. Minto Phase V Preliminary Feasibility Study Technical Report, December 2010. Effective date: December 15, 2010.
	SRK Consulting. 2009. Minto Phase IV Pre-Feasibility Technical report, December 2009.
	Minto SFN Traditional Knowledge Study Report (KCB 2011)
Other Data Sources	Minto Explorations Ltd. Human Resources data and other records
	Statistics Canada census data (2011, 2006, 2001)
	Indian and Northern Affairs Canada First Nation profile data
	Government of Yukon statistics, reports, and data
	SFN website and related materials
	Various public online sources (e.g., community websites)

Please note that Census data presented in this Study reflects available Census data at the time that this report was prepared. Distortions and/or differences in counts or "totals" presented reflect Census Canada findings. Please refer to specific Census references for more detailed information regarding Census Canada's methodology.

2.3.2 Primary Data Collection

Primary data was used to validate and supplement information gathered through the data review, as well as inform the development of VSECs. Data was gathered from SFN citizens, residents, and service providers residing and/or working within the LSA at community meetings and interviews (i.e., one-on-one, small group, or phone).

Primary data collection used an adaptive, community-based, participatory process established with SFN during the Minto *SFN Traditional Knowledge Study* report (KCB 2011) and from ongoing engagement with the SFN community. This approach was designed to facilitate meaningful community involvement and a transparent study process. Key study activities included:

- development and use of an informed consent form which addressed:
  - the Study's purpose and funding source;

  - participants' rights (including ownership and protection of contributions);
  - confidentiality;
  - why their involvement was sought; and
  - storage and archiving of contributions.
- holding a community meeting to "kick-off" Study activities with the SFN community;
- inviting all SFN citizens to participate in the Study;
- advertising Study events broadly through community postings; letters; and meetings;
- communicating project developments to the SFN community through newsletters, meetings, and handouts;
- adjusting the study approach to reflect input and requests from the SFN (e.g., extra meetings and use of multiple data collection methods);
- use of an open-ended, semi-structured interview format and key questions to help standardize the interviews; and
- providing an opportunity for study participants to review and validate their contributions.

Interviewee contributions are referenced throughout this report as "(INT#)". The number following "INT" indicates the unique code assigned to each interview. The names and/or identifiers of interviewees have been removed to ensure confidentiality.

In an effort to demonstrate the principle of reciprocity, participants were given a personalized, custom-made, handwritten thank you card to express appreciation for their contributions and involvement following study events. SFN citizens were given honoraria by Minto in appreciation of their valuable contributions and time spent being interviewed by the research team. Interviewees participating in the Study solely on behalf of the organization or agency that they worked for, were not provided with a honoraria for their time, but were given a handwritten thank you card.

2.4 Effects Assessment

This socio-economic effects assessment generally followed the YESAB's "Guide to Socio-economic Effects Assessments" (YESAB 2006). Interactions between the VSECs and the Project were identified, and based on available data an assessment was made as to the extent to which the Project and associated activities during all project stages (i.e., operations, decommissioning, and closure) could affect the VSECs. If conflicting socio-economic effects were identified (i.e., an effect was found to have potential positive and/or negative effects) all effects were considered and assessed and a conclusion made as to the overall effect. Once identified, the overall effect on the VSEC was characterized based on the nine criteria identified below:

- **Magnitude**: The measurable effect on a particular VSEC compared to existing baseline conditions.

- **Spatial scale:** The extent of the geographic range that a socio-economic effect may be experienced.
- **Duration:** The temporal boundary, or length of time, that an effect is expected to last.
- **Direction:** Whether an effect is anticipated to be positive, negative, or neutral. The "direction" of an effect can be both positive and negative. In a case where this occurs, the predominant direction of the net impact will be determined.
- **Frequency:** When and how often an effect was expected to occur.
- **Reversibility:** Whether or not an effect could return to 'existing baseline' conditions once project activities cease.
- **Socio-economic context:** The context of the existing socio-economic environment(s) that the project is expected to affect.

The criteria by which the effects were characterized are identified in Table 2.3. It should however be noted that if an effect was positive or neutral, reversibility and socio-economic context were not characterized.

Table 2.3 Summary of Assessment Criteria for Socio-economic Effects and Residual Effects

Criteria	Definition
Magnitude	
None	No effect, no measurable change from existing baseline condition(s)
Low	Measurable low-level effects, including typical ongoing change, at the individual level.
Medium	Measurable effects at the community level.
High	Measurable and sustained effect on VSEC exceeding a standard or threshold of some other level of acceptable change.
Spatial scale	
Local	Within an area(s) in the LSA.
Regional	Within an area(s) in the RSA.
Duration	
Short-term	Effect is limited to one particular phase of the Project (i.e., operations, decommissioning and closure, post-closure).
Long-term	Effect occurs throughout two or more phases of the Project and/or beyond proposed mine life.
Direction	
Negative	Impact has an undesirable or worsening effect.
Neutral	No change in comparison to baseline conditions.
Positive	Has a desirable or improving effect.
Frequency	
Low	Effect occurs infrequently.
Intermittent	Effect occurs sporadically.
Continuous	Effect is constant.
Reversibility	
Yes	Effect will be reversed once the Project activity ends.
No	Effect cannot be reversed one the Project activity ends.
Socio-economic context	
Not Resilient	Located within an area considered to be "socio-economically fragile" due to existing adverse socio-economic

Criteria	Definition
	effects from other projects, stresses, or changes.
Resilient	Located within an area considered to be "socio-economically robust" due to no or few existing adverse socio-economic effects from other projects, stresses, or changes.

In this report potential effects are described either quantitatively (measureable) or qualitatively (descriptive). Input received from interested parties (e.g., SFN, land-users, tripartite Socio-economic Working Group, government agencies) through the course of the Study was also considered in the assessment and in the characterization of the effects.

Once potential effects were identified and characterized, mitigation measures were identified for those effects that were characterized as being adverse and potentially significant. For those effects assessed to be neutral or positive, no further testing for significance was conducted as per YESAA guidance (YESAB 2006). However, given the interest of the SFN in potential project effects, potential enhancement measures were identified for potential neutral or positive effects.

2.5 Cumulative Effects Assessment

Though no specific definition of "cumulative effects" is provided by the Yukon Environmental and Socio-economic Assessment Act, this assessment adapted YESAB's concept for "cumulative effects": "…combined environmental or socio-economic impacts that accumulate from a series of similar or related individual actions, contaminants, or projects. Although each action may seem to have a small impact, the combined effect can be significant" (YESAB 2005).

The objective of a CEA is to examine how identified residual effects from other projects and activities may interact with predicted residual project effects in all project phases (i.e., operations, decommissioning, and closure). The socio-economic baseline details existing conditions, which include residual effects that may exist from past and/or existing projects and activities.

The information currently available to Minto that would aid in conducting a comprehensive socio-economic cumulative effects assessment is limited. Minto does, however, believe that a CEA of socio-economic conditions is an important endeavour and is committed to contributing to the cumulative effects monitoring program that SFN and the YG are developing. Given the remaining expected life of the mine, commencement of this program to address broader regional and cumulative effects remains a high priority and commitment for Minto, working in close collaboration with SFN and the YG.

2.6 Data Constraints and Limitations

Minto recognizes the need to better understand the socio-economic effects of the mine on the LSA, SFN citizens, and the RSA, but has experienced challenges in securing the comprehensive, community-based data required to do so for some VSECs. Examples of data constraints included:

- primary SFN data (e.g., input from SFN citizens residing outside of the Pelly Crossing and Minto Area, SFN traditional economic data);

- the ongoing limitations of community-level data due to data suppression for privacy considerations;
- the constraints of limited pre-project baseline references and the temporal variability and inconsistencies across VSECs that make the analysis of trend information difficult;
- access to confidential agreements (e.g., Trapline Concession Cooperation Agreement, Minto Mine-SFN Cooperation Agreement);
- access to the complete results of the 2011 Census Canada data. As a result for some topics, the most recent census data available is from 2006 (which reflects pre-mining conditions, as Minto did not begin operations until 2007); and
- access to survey data (e.g., Aboriginal Peoples Survey, First Nations Regional Health Survey).

Future socio-economic studies conducted by Minto will be strengthened if the data limitations and constraints listed above are resolved, and additional project specific information becomes available. Additional data from these sources, as well as from the establishment of an annual Minto Project Effects Monitoring Program by the tripartite Socio-economic Working Group, will contribute to a better understanding of existing socio-economic conditions, and potential socio-economic and cumulative effects, especially with respect to the LSA.

Despite the limitations, Minto believes that the available data does provide sufficient basis from which to identify potential effects and the means through which to work to mitigate or enhance the effects. Furthermore, Minto remains fully committed to the project effects monitoring program that has been developed by the tripartite Socio-economic Working Group so that management responses (i.e., mitigation or enhancement) can be made to any identified adverse socio-economic effects. Minto and SFN agree that efforts will be devoted to implementing and utilizing the project effects monitoring program to advance understanding and management of socio-economic effects.

Minto also remains committed to contributing to the cumulative effects monitoring program that SFN and YG are developing. Given the remaining expected life of the mine, commencement of this program to address broader regional and cumulative effects remains a high priority and commitment for Minto working in close collaboration with SFN and the YG.

3 SOCIO-ECONOMIC BASELINE

The socio-economic baseline conditions in the RSA and LSA are described in the following sub-sections with respect to individual VSECs. In developing the baseline, all 14 VSECs were examined with the focus being on those where potential project effects were identified, as well as on areas of particular interest to the SFN.

3.1 Business Opportunities

Data related to material well-being was compiled from existing data (i.e., reports, publications, articles, etc.), Minto internal data, statistics, and primary data sources. The 2011 Census data related to employment, income, economic, and business data were not released at the time that this Study was completed.

3.1.1 Overview of RSA and LSA

Business opportunities in the RSA are related directly to economic activity in Yukon. Economic activity in Yukon and the RSA and LSA are primarily associated with the mining and mineral exploration, construction, trade, oil and gas, and tourism industries (Yukon Government 2013). The traditional economy is also important to many First Nations in the RSA and LSA; the traditional economy in the LSA is discussed in Section 3.5.

3.1.1.1 Sectors

Mining

The Yukon mining industry is experiencing a period of strong growth (Yukon Government 2013). Factors contributing to this include ongoing strength in exploration, placer mining, three operating mines (i.e., Minto, Wolverine, and Bellekeno), six mining projects going through permitting, and 10 projects that are in the advanced exploration or feasibility stage. It is expected that this sector will continue to be strong as projects at the permitting and or advanced exploration/feasibility stages may come into production within the next five years (Yukon Government 2013).

The value of mineral production in Yukon has been increasing since 2005 and is expected to reach approximately $450 million[4] in 2012, a 12% increase from 2011 (Yukon Government 2013). Yukon mineral production reflects the higher production from the Wolverine Mine in 2012.

As of March 2013 there were 27 active[5] mining-related projects within a 50 km radius of the Project registered with the YESAB Online Registry. These included 11 placer projects, 15 quartz mining projects (not including the mine), and one “other” coal mining project.

In addition there are also numerous placer mining projects and operations as well as other mining projects in Yukon as noted earlier. For example, the Carmacks Copper project and the Casino project located approximately 38 km southeast and 80 km west of the Project, respectively. The Carmacks

[4] All monetary values presented in this report are presented in Canadian dollars, unless otherwise specified.
[5] “Active” projects were defined in this study as those listed on the YESAB registry. Projects with an “assessment discontinued” status were not considered as “active project”.

Copper project is currently revising its October 2012 pre-feasibility report and conducting permitting-related activities. The Casino project has completed its prefeasibility report and expects permitting-related activities to be completed from by2015, heap production to begin in 2015, and mill production to begin in 2016 (Western Copper and Gold 2013).

Operating Mines

The Yukon mining industry directly contributes to the construction industry, through development work activity at the three currently operating mines. Capstone Mining Corp. had budgeted over $32 million for capital expenditures on work in 2012 for the mine (Yukon Government 2013). Furthermore, the Wolverine project had budgeted $10 million to $15 million for continued work in 2012 (Yukon Government 2013). Comparable information for Bellekeno was not available. Contributions from the mining industry to the construction industry are expected to continue as a result of new projects and further developments on existing ones.

The Minto Mine is the only commercially operating mine in the LSA. The other operating Yukon mines, Wolverine and Bellekeno, are located approximately 840 km by road southeast of Minto (via Ross River) and approximately 220 km by road north of Minto, respectively. Minto contributes directly to the territory's economy through its use of Yukon suppliers of goods and services. In total, Minto spent $81 million on goods and services provided by 134 suppliers within the LSA and RSA in 2012 (Table 3.1). This represents approximately 29% of the total Minto Mine supplier contracts in 2012. The remaining 2012 suppliers were based throughout Canada (British Columbia, Alberta, Northwest Territories, Ontario, Manitoba, New Brunswick, Quebec) (19%), the USA (51%), and other countries including Australia and Holland (1%) (Figure 3.1).

Table 3.1 Summary of 2012 Minto Mine Supplier Expenditures, by RSA and LSA[6]

Area	Location	Total Expenditures
RSA	Whitehorse	$80,594,729
	Carmacks	$577
	Carcross	$360
	Dawson City	$10,300
	Total RSA	$80,605,966
LSA	Pelly Crossing	$413,523
	Minto	-
	Total LSA	$413,523
	Total (All)	81,019,488

Source: Data provided by Minto.

[6] Please note that some of the SFN - Minto joint ventures are represented as part of the RSA, with respect to their office location.

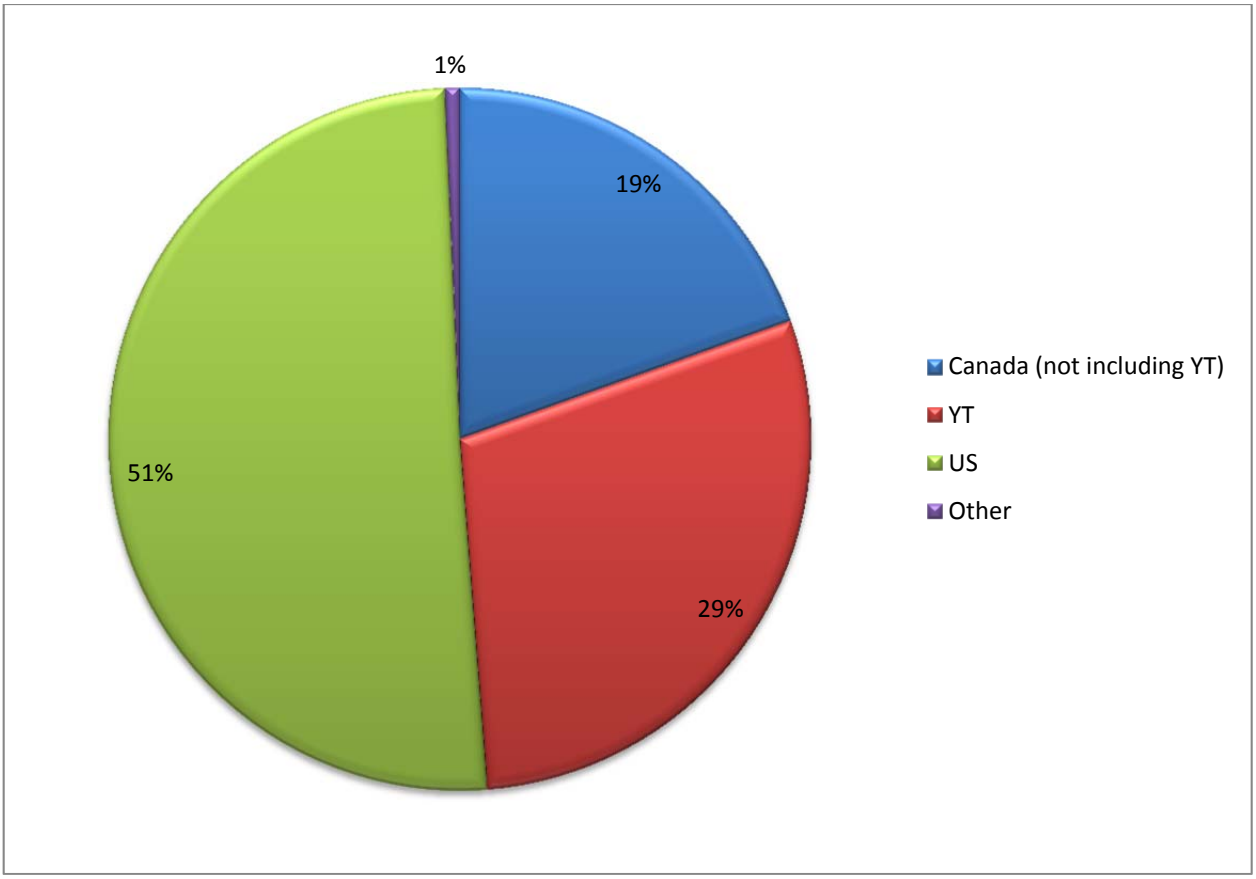


Figure 3.1 Summary of Minto Mine 2012 Supplier Locations

Construction

Construction in the RSA and LSA is characterized by residential, commercial and industrial related construction developments. In 2012 building permits in Yukon were predicted to be worth $150 million ($52 million of which were in Whitehorse), down from the 2011 record value of $177 million, a value 34% higher than in 2010 ($132 million). Residential permit value reached $71.5 million in 2011, up almost 45% from 2010, while institutional permit value reached $71 million in 2011, up almost 50% from 2010.

In 2012, almost half of the $35 million allocated for addressing land availability and housing needs by the YG was allocated to development in Whitehorse which is expected to include 3,900 housing units which will accommodate nearly 8,000 people and help address the housing shortfall in the territory.

In 2012/2013 over $51 million was allocated by the YG for various transportation projects, including $15 million for the Shakwak project for the Haines Road and North Alaska Highway, over $7 million for reconstruction of the Campbell Highway from km 10 to km 190, and $6 million for the rehabilitation of the Upper Liard Bridge.

Other funding commitments included:

- new wells, pump houses, and treatments plants to improve drinking water quality in ten settlements ($15 million);
- improvements to water and wastewater systems in four settlements (>$12 million);
- a new recreational centre in Ross River ($7 million); and
- expenditures in Whitehorse related to water and sewer services, improvement at the Erik Nielson Airport, and a variety of other projects.

The mining industry also contributes to the construction industry in Yukon as was described earlier in Section 3.1.

Trade

Mining activity in Yukon has contributed to the growth of retail sales by supporting territory employment and population. The value of Yukon retail sales totaled approximately $617 million in the first 11 months of 2012, and is expected to total over $675 million for 2012 (Yukon Government 2013). Between 2010 and 2011 sales from food and beverage stores increased by 4.4% to $196 million, sales from clothing and accessory stores increased by 6% to $18 million, and sales from other store was greater than $400 million (Yukon Government 2013).

Tourism

The level of tourism in Yukon has been fairly constant with recorded annual international border crossings of 311,542 in 2010 and 309,863 in 2011. There was a 5.7% increase in visitation via motor coach, as compared to a 4.2% decline in visitation via private vehicle between 2010 and 2011. The number of passengers transiting Erik Nielsen Whitehorse International Airport increased by 7.7% during the same period. This is the third consecutive annual increase in the number of air travel passengers, suggesting a growing interest in travel to the territory and/or the preferred mode of transportation used by tourists (Yukon Government 2013).

Americans account for two-thirds of all border crossings; however, visitation from the United States was down 3.5% between 2010 and 2011 while non-U.S. visitation during the same period increased by 6% to 103,592 visitors. This includes a 5.1% increase in visitation from other parts of Canada, and a 14.5% increase in visitation by Asia/Pacific tourists (Yukon Government 2013).

Tourism in Yukon is expected to slightly increase in the near-term; however the strong Canadian dollar could both deter visitors from the U.S. and encourage Canadians to holiday abroad. Additionally, the unstable global economy and increasing oil prices could negatively impact travel in general (Yukon Government 2013).

Tourism related facilities in the LSA include the Minto Resort, Fort Selkirk, Big Jonathan House Heritage Centre, and a campground and motel in Pelly Crossing.

Oil and Gas

Continued mining development in Yukon is increasing the demand for local, cost-effective sources of energy production. In response, the Department of Energy, Mines and Resources is examining opportunities to develop Yukon's natural gas and oil industries to meet these demands though the Yukon natural gas industry has been in general decline since 1999. Production at Yukon's only producing natural gas field, Kotaneelee, had continued to decrease, with production of 30.1 Mm^3 in 2012, down from 45.1 Mm^3 in 2011, and 51.6 Mm^3 in 2010 (Yukon Economic Development 2013). Kotaneelee Gas project is located in the southeast Yukon, between the Rocky Mountains to the south and the Mackenzie and Franklin Mountains to the north. Kotaneelee is located approximately 1,000 km southeast of Whitehorse by road.

The potential development of the Alaska Highway Pipeline project and the Mackenzie Gas project has been ongoing for a number of years. Neither development is likely to occur in the short-term due to recent U.S. shale gas developments, which have lessened the demand for Alaskan natural gas and contributed to a decrease in the price of natural gas (Yukon Government 2013).

3.1.2 LSA

Business and employee data for the LSA is available from 2007. Since this time, the number of businesses in Pelly Crossing has ranged between a low of eight businesses (2008 and 2010) and a high of 10 businesses (2009) (Government of Yukon 2011). Further, the number of reported employees in Pelly Crossing has ranged between a low of 13 employees in 2010 and a high of 61 employees in 2007 (Government of Yukon 2011).

The SFN Selkirk Development Corporation had developed seven major contract joint ventures with Minto, with a total value of $39.1 million per annum as of December 2012 (Table 3.2). Pelly Construction was the joint venture company with the largest contract value in 2012; Pelly Construction provides mining and mobile equipment supply, and is involved with open pit mining at the Minto site and providing ancillary equipment for various jobs.

Table 3.2 SFN Selkirk Development Corporation Joint Venture Contractors with the Minto Mine, December 2012

Major Contractors	Type of Contractor	SFN Employment Arrangement	Contract Duration (years)	Value per annum ($ million)	Total Value ($ million)
Parkland Fuel	Fuel contract	Terms include funds payment to SFN	2012-2017	10.5	52.5
Dyno Nobel	Explosives contract	N/A	Not Available	3.5	3.5
Sodexo	Catering and janitorial	Terms include employment arrangement with SFN	2010–2013	3.1	9.3
Pelly Construction	Mining services	Terms include funds and employment arrangement with SFN	2012–2017	15.0	75.0
Driftwood Diamond Drilling	Exploration drilling	Terms include funds and employment yearly, as required	Not Available	4.6	4.6
Glacier Drilling	Exploration drilling support	Terms include funds and employment arrangement with SFN yearly, as required	Not Available	0.8	0.8

Major Contractors	Type of Contractor	SFN Employment Arrangement	Contract Duration (years)	Value per annum ($ million)	Total Value ($ million)
SGS Canada	Contract lab services	Terms include employment arrangement with SFN	2011–2016	1.6	8.0
Total				39.1	153.7

Source: Data received from Minto.

In August 2012, some of the private businesses operating in the LSA were: the Minto Resort, Selkirk Center (includes a gas station, store, motel, TD Bank Branch, and Canada Post office), Gramma's Kitchen, Audrey's Creations, Eugene Alfred, SFN Artisans, the Pelly Farm, and the McCabe Farm that sells fresh produce (i.e., vegetables), plants (i.e., vegetables and flowers), livestock (pigs, chickens, turkeys), and horses.

3.1.2.1 Minto Mine Business

In 2008 (January to December), the Minto Mine had 68 suppliers with the value of all contracts totaling approximately $55.4 million. In 2009 (January to December), the Minto Mine had 69 suppliers with the value of contracts totaling approximately $65.6 million. In 2012, the Minto Mine had 475 suppliers with the value of all contracts totaling approximately $277.3 million. Of the 2012 contracts, 94% represent Canadian suppliers (or 447 suppliers), and 6% represent foreign suppliers (or 28 suppliers).

Canadian suppliers are based in Yukon (136 suppliers, with total contracts valued at approximately $81 million), British Columbia (140 suppliers, with total contracts valued at approximately $23 million), Alberta (66 suppliers, with total contracts valued at approximately $14 million), Saskatchewan (six suppliers, with total contracts valued at approximately $350 thousand), Manitoba (three suppliers, with total contracts valued at approximately $1 million), Ontario (79 suppliers, with total contracts valued at approximately $14 million), Quebec (11 suppliers, with total contracts valued at approximately $850 thousand), New Brunswick (one supplier, with total contracts valued at approximately $23 thousand), and the Northwest Territories (five suppliers, with total contracts valued at approximately $264 thousand).

Specifically, with regards to Yukon, this includes 29 suppliers in the LSA (6.1% of total 2012 suppliers), with a total contract value of approximately $413,000 (or 0.1% of the total 2012 contract value), and 107 suppliers in the RSA (or 23% of total suppliers), with a total contract value of approximately $80.6 million (or 29% of the total 2012 contract value).

As of 2012, the Minto Mine and SFN had seven joint ventures established which currently have ongoing contracts. These include: Parkland Fuel (Fuel Contract), Dyno Nobel (Explosives Contract), Sodexo (Catering and Janitorial), Pelly Construction (Mining Services), Driftwood Diamond Drilling (Exploration drilling), Glacier Drilling (Exploration Drilling Support), and SGS Canada (Contract Lab Services) (data provided by Minto).

3.2 Employment Opportunities

This section provides an overview of employment and employers in the RSA and LSA with a focus on the major employers in the LSA, including the Minto Mine.

Employment-related data to the RSA (Yukon) and LSA (Pelly Crossing) was available from the censuses of 2001, 2006, and, for certain aspects, 2011 data, as well as from the Yukon Bureau of Statistics (YBOS), Minto, and some Minto contractors.

Please note that employment statistics are dynamic and may differ throughout the course of a year, depending on when employment data was gathered. Dates are provided with gathered data wherever possible.

3.2.1 Employment by Industry and Occupation

Employment by industry remained fairly constant between 2006 and 2013. In February 2013, the majority of employed Yukoners (85.2% or 15,500) were in the service-producing sector, and 15.4% (2,800) were in the goods-producing sector (YBOS 2013).[7] A similar trend was observed in the Aboriginal workforce with 84.8% of employed Aboriginals working in the service-producing sector and 18.2% in the goods-producing sector in 2012 (YBOS 2013b). This is consistent with the 2006 Census data, which reveals that 86.7% (15,020) of Yukoners were employed in the service-producing sector, and 13.2% (2,290) were employed in the goods-producing sector (YBOS 2009).

Based on Census data from the two most recent data periods, Pelly Crossing employment opportunities are predominantly based in the service industry. In 2006, 86% of the population was employed in the service industry and in 2001 when 82% was employed in the service industry (Table 3.3**;** Statistics Canada 2007, Statistics Canada 2002). Of note is that in both 2001 and 2006 there were no recorded females employed in the goods industry (Table 3.4**;** Statistics Canada 2007, Statistics Canada 2002).

Table 3.3 Summary of Employment in Pelly Crossing, 2006 and 2001

Industry	2006				2001			
	Total	%	Male	Female	Total	%	Male	Female
Total experienced labour force 15 years or over	175	100	100	80	195	100	100	95
Goods Industry	25[8]	14	25	0	35[9]	18	35	0
Service Industry	150[10]	86	75	75	160[11]	82	70	85

Source: Statistics Canada 2007, Statistics Canada 2002

[7]The service-producing sector comprises industries that provide services (e.g., trade, business, health care, education, etc.), and the goods-producing sector involves those industries that extract or processes resources from the earth (e.g., mining, forestry, fishing, etc.).

[8]Industries considered as part of the "goods industry" in the 2006 Census included: "agriculture and other resource-based industries"; "construction"; and "manufacturing".

[9]Industries considered as part of the "goods industry" in the 2001 Census included: "agriculture and other resource-based industries"; and "manufacturing and construction industries".

[10]Industries considered as part of the "service industry" in the 2006 Census included: "wholesale trade"; "retail trade"; "finance and real estate"; "health care and social services"; "educational services"; "business services"; and "other services".

[11]Industries considered as part of the "services industry" in the 2001 Census included: "wholesale and retail trade"; "finance and real estate"; "health and education"; "business services"; and "other services".

As shown in Table 3.4, the proportion of individuals employed in "other services" increased by 16% in Pelly Crossing between 2001 and 2006, and by 3% in Yukon during this same time period. The "wholesale and retail trade" and the "finance and real estate" industries are two industries not represented in Pelly Crossing in 2006.

Table 3.4 Employment by Industry, 2006 and 2001 (%)

Industry %	Pelly Crossing						Yukon					
	2001			2006			2001			2006		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total experienced labour force 15+ years and over (#)	195	100	95	175	100	80	17,665	9,045	8,625	18,895	9,695	9,205
Agriculture & other resource-based industries	5	10	0	9	15	0	5	8	2	5	8	2
Construction and Manufacturing	13	25	0	6	10	0	10	17	2	9	15	3
Wholesale and retail trade	5	0	11	0	0	13	13	13	13	12	13	11
Finance and real estate	0	0	0	0	0	0	3	2	4	3	2	3
Health care and social services, and education[12]	18	10	26	17	10	25	16	8	24	16	8	24
Business services	15	20	16	9	10	13	16	18	13	15	18	12
Other services	44	40	47	60	55	56	37	34	41	40	36	44

Source: Statistics Canada 2007, Statistics Canada 2002

The majority of employed individuals in Pelly Crossing in 2006 were employed in "sales and service occupations" (19%), followed by "social science, education, government service and religion" and "trades, transport and equipment operators and related occupations" (17%) (Table 3.5); these three types of occupations also employed the greatest proportions of individuals in Pelly Crossing in 2001, though "social science, education, government service and religion" occupations employed the majority of individuals at that time (21%). In the Yukon in 2006, "sales and service occupations" (23%) employed the most individuals, followed by "business, finance and administration occupations" (16%), and "trades, transport and equipment operators and related occupations" (16%).

[12] Please note that 'Educational services' were included in this tabulation from the 2006 Census, to enable comparison to the 2001 Census which includes this type of service in its calculation.

Table 3.5 Employment by Occupation, 2006 and 2001

Occupation	Pelly Crossing						Yukon					
	2001			2006			2001			2006		
	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total experienced labour force 15 years+	195	100	95	180	95	80	17,670	9,040	8,625	18,895	9,690	9,205
Management occupations	15 (8%)	0 (0%)	10 (11%)	20 (11%)	10 (11%)	10 (13%)	2,255 (13%)	1,325 (15%)	925 (11%)	2,435 (13%)	1,525 (16%)	910 (10%)
Business, finance and administration occupations	25 (13%)	0 (0%)	30 (32%)	20 (11%)	0 (0%)	15 (19%)	3,130 (18%)	545 (6%)	2,590 (30%)	3,045 (16%)	570 (6%)	2,480 (27%)
Natural and applied sciences and related occupations	10 (5%)	10 (10%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1,120 (6%)	850 (9%)	270 (3%)	1,290 (7%)	980 (10%)	315 (3%)
Health occupations	10 (5%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	705 (4%)	160 (2%)	555 (6%)	905 (5%)	210 (2%)	700 (8%)
Social science, education, government service and religion	40 (21%)	10 (10%)	30 (32%)	30 (17%)	10 (11%)	20 (25%)	2,145 (12%)	700 (8%)	1,440 (17%)	2,260 (12%)	690 (7%)	1,565 (17%)
Art, culture, recreation and sport	10 (5%)	0 (0%)	0 (0%)	15 (8%)	10 (11%)	0 (0%)	640 (4%)	290 (3%)	350 (4%)	700 (4%)	305 (3%)	390 (4%)
Sales and service occupations	35 (18%)	15 (15%)	20 (21%)	35 (19%)	15 (16%)	20 (25%)	4,045 (23%)	1,820 (20%)	2,220 (26%)	4,370 (23%)	1,870 (19%)	2,495 (27%)
Trades, transport and equipment operators and related occupations	30 (15%)	35 (35%)	10 (11%)	30 (17%)	25 (26%)	0 (0%)	2,835 (16%)	2,675 (30%)	160 (2%)	3,060 (16%)	2,880 (30%)	180 (2%)
Occupations unique to primary industry	25 (13%)	20 (20%)	0 (0%)	15 (8%)	15 (16%)	0 (0%)	530 (3%)	460 (5%)	65 (1%)	670 (4%)	545 (6%)	125 (1%)
Occupations unique to processing, manufacturing and utilities	10 (5%)	0 (0%)	0 (0%)	10 (6%)	10 (11%)	0 (0%)	260 (1%)	225 (2%)	40 (0%)	155 (1%)	125 (1%)	30 (0%)

Source: Statistics Canada 2007, Statistics Canada 2002

3.2.2 Labour Force Activity

The labour force includes employed and unemployed individuals aged 15 years or older. As the labour force activity component of the 2011 Census was not available for consideration at the time that this report was prepared, data was considered from the 2001 and 2006 Census Canada data, as well as available information from the Yukon Bureau of Statistics.

3.2.2.1 Participation Rate

The labour force participation rate indicates the total labour force from a particular group, with respect to the total population aged 15 years or older in that group. In 2012, Yukon had the second highest participation rate in Canada at 75.6% (YBOS 2013b). Yukon's high participation rate was observed between 2003 and 2012 when the territory's average participation rate was 75.2%, in comparison to Canada's 67.2% over the same time period (YBOS 2013). The Yukon Aboriginal participation rate was 67.2% in 2012 (YBOS 2013). The Pelly Crossing participation rate decreased by 4.5% from 2001 (81.6%) to 2006 (77.1%) (Statistics Canada 2007; Statistics Canada 2002). The decrease in the total labour force participation rate reflects a decrease in the female participation rate, which decreased from 82.6% in 2001 to 72.7% in 2006. A similar decrease was not observed in the male population where rates actually increased from 76.9% in 2001 to 80% in 2006 (Statistics Canada 2007; Statistics Canada 2002).

3.2.2.2 Employment Rate

The employment rate indicates the number of employed individuals within a particular group with respect to the population aged 15 years or older in that group. The 2012 employment rate in Whitehorse was 72.9% and in rural Yukon was 60.9% (YBOS 2013b). The Aboriginal employment rate in Yukon was 54.1% in 2012 (YBOS 2013b).

The Pelly Crossing employment rate has remained fairly constant between 2006 (58.3%) and 2001 (57.1%); however, the rate of male and female employment has changed. In 2006 the female employment rate was 59.1%, or 10.5% less than the 2001 rate of 69.6% (Statistics Canada 2007; Statistics Canada 2002). The rate of male employment increased during this same time period from 50% in 2001 to 64% in 2006 (Statistics Canada 2007; Statistics Canada 2002).

3.2.2.3 Unemployment Rate

Yukon's unemployment rate was 6.9% in 2012 (YBOS 2013b). Between 2003 and 2012, the highest rate of unemployment in Yukon was experienced in 2003 (10.1%) (YBOS 2013b). Employment in Yukon has since changed; in November 2012 the unemployment rate of 5.5% was the fourth lowest in Canada and was 1.7% below the national rate of 7.2% (YBOS 2012c). In 2006, approximately 69% of all employed Yukoners were based in Whitehorse (YBOS 2009).

Unemployment rates in Yukon are typically higher in rural areas than in Whitehorse or the territory as a whole. For example, in 2006, when the unemployment rate was 9.4% in Yukon and 7.4% in Whitehorse, the unemployment rates in Pelly Crossing, Carcross, Carmacks, Mayo, and Dawson City were 24%, 21%, 19%, 17%, and 13% respectively (Statistics Canada 2007; Statistics Canada 2007b; Statistics Canada 2007c; Statistics Canada 2007d; Statistics Canada 2008; Statistics Canada 2008b). Of

particular note, Pelly Crossing had the highest unemployment rate of all Yukon communities in 2006 (YBOS 2009).

The Aboriginal unemployment rate was 17.1% in 2012 (YBOS 2013b). The unemployment rate in Pelly Crossing decreased from 2001 (30%) to 2006 (24.3%) by 5.7% (Statistics Canada 2007; Statistics Canada 2002). The overall decrease in unemployment can be attributed to a decrease in male unemployment, as the male unemployment rate decreased from 40% in 2001 to 25% in 2006 (Statistics Canada 2007; Statistics Canada 2002). A different trend was observed for the female unemployment rate where female unemployment increased from 15.8% in 2001 to 18.8% in 2006 (Statistics Canada 2007; Statistics Canada 2002). In a 1994 socio-economic description of Pelly Crossing it was estimated that the unemployment rate was 50% in the summer and even higher in the winter at that time (Hallam Knight Piesold Ltd. 1994).

3.2.2.4 Employment Insurance Beneficiaries and Social Assistance

Individuals who receive employment insurance (EI) benefits are considered to be "employment insurance beneficiaries". The number of all EI beneficiaries has remained fairly constant over the last 10 years in key communities within the LSA and RSA indicating that economic activity in Yukon has had little influence on employment rates (Table 3.6). In October 1993, there were 25 unemployment insurance claims in Pelly Crossing (Hallam Knight Piesold Ltd. 1994).

Table 3.6 Employment Insurance Beneficiaries (All) in Key LSA and RSA Communities, 2002 to 2012

Area	Year (December)										
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Pelly Crossing	20	30	30	20	20	20	20	20	30	20	20
Whitehorse	920	860	820	770	740	710	760	920	810	810	820
Dawson City	200	200	200	200	170	210	230	230	220	230	200

Source: Statistics Canada 2013b; Statistics Canada 2013c; Statistics Canada 2013d.

3.2.2.5 Employment Type

The majority of Yukon's 16,100 employees were employed in permanent positions (83.8%), in 2012, with approximately 16.9% employed temporarily (YBOS 2013b). In November 2012, approximately 85.7% of employees in the YT were employed full-time (YBOS 2012b).

3.2.3 Employers

3.2.3.1 RSA

In 2006, approximately 69% of all employed Yukoners were based in Whitehorse (YBOS 2009). Since this time the number of businesses and the number of reported employees have increased. In 2010, Whitehorse had 2,182 businesses reporting headquarters in the community and 10,259 reported employees (YBOS 2011). In comparison, Carcross had 27 businesses and 61 employees (YBOS 2011), Carmacks had 18 businesses and 65 employees (YBOS 2011), and Pelly Crossing had 8 businesses and 13 employees (YBOS 2011). A number of the Minto mine contractors are headquartered in the RSA.

3.2.3.2 LSA

The major employers in Pelly Crossing are the Minto Mine, the SFN Administration, and the Yukon Government. An examination of 1994 *Socio-economic Description and Impact Assessment Study* (Hallam Knight Piesold Ltd. 1994) reveals that employment options have not diversified significantly in the last 19 years when the major employers were the SFN administration (referred to then as "the First Nation office"), the mining industry (with approximately nine to 10 citizens working at the Casino project and the Elsa Mine), and the Yukon Government (including one position at the Pelly Crossing Health Centre, one at the Yukon College, two at the Eliza Van Bibber School, and an unknown number of employees at the Fort Selkirk historical site (Hallam Knight Piesold Ltd. 1994). There were also a number of smaller employers in the LSA; however, as stated in the 2007 Integrated Community Sustainability Plan (ICSP), Pelly Crossing is considered to have limited work opportunities as a result of its small size and limited economy (Inukshuk Planning and Development 2007).

Minto Mine

Individuals may be employed directly by Minto or indirectly through its contractors. Three of the Minto mine contractors are Pelly Construction, Sodexo, and Dumas Mining. Minto and its contractors are committed to providing employment and training opportunities to SFN citizens, as described further in Section 3.9.

It should be noted that depending on the date that data was compiled, reported employment levels may differ. Where possible, dates are provided with presented data to clarify any differences.

Minto

Minto works to increase the participation of RSA and LSA residents at the mine through a number of initiatives including:

- **SFN employment opportunities at the mine:** The Minto – SFN Cooperation Agreement includes provisions for SFN citizen employment at the Minto Mine;
- **Preferential hiring of LSA residents:** If possible, Minto prefers to hire employees and suppliers within the LSA to benefit the LSA community; and
- **Competitive wage and benefits package:** Minto offers its employees attractive wage and benefits to encourage long-term employment and reduce staff turnover.

Minto is currently working with the SFN to develop initiatives to increase SFN employment at the mine including the creation of a SFN-Minto Mine Employment Liaison position. This position was created in 2012 for an SFN citizen based in Pelly Crossing, and is expected to be maintained throughout Project operations. The overall objective of this position is to support and develop Minto Mine-SFN employment opportunities through increased communication and support (regarding employment and training) with the SFN community. Furthermore, the following three priorities were identified as key responsibilities of this position (INT04):

- Increasing SFN training opportunities, by working with Minto and its contractors to provide on-the-job training, by developing a good partnership between Minto and SFN, and by working to develop more apprenticeship opportunities.
- Liaising with Minto contractors to identify their plans, initiatives, and potential employment positions and/or opportunities for SFN citizens.
- Identifying employment/training opportunities for SFN citizens, as well as for Northern Tutchone Council member nations and other Yukon Aboriginal communities.

As of September 2012, Minto employed 148 individuals and in 2010 Minto employed 120 individuals (Table 3.7). In 2012, the majority of employees (55%) were based out of British Columbia, followed by Yukon-based employees (35%) (Table 3.7). Between 2010 and 2012, Minto employment at the mine increased by 23%, or 28 employees, and while the number of Yukon based employees only decreased by one, the proportion of Yukon-based employees decreased from 44% in 2010 to 35% in 2012.

Table 3.7 Minto Employee Permanent Place of Residence, 2010 to 2012

#	Province of permanent residence	Number of Employees	
		2010[13]	2012[14]
1	Alberta	Not available	8
2	British Columbia	Not available	81
3	Manitoba	Not available	1
4	New Brunswick	Not available	3
5	Newfoundland	Not available	1
6	Nova Scotia	Not available	1
7	Ontario	Not available	1
8	Yukon	53	52
Total Employees		120	148

Source: Data provided by Minto.

Aboriginal Employment

The Minto Mine Human Resources Department is involved with developing and maintaining relationships with local First Nations, as well as maximizing Aboriginal employment opportunities. Between 2010 and 2012, the proportion of First Nation employees at the mine (not including SFN) declined by 1.2%, from 11.3% to 10.1% (Table 3.8). A 1.4% decline in the proportion of SFN Minto employees was also observed between 2010 and 2012, from 12.9% to 11.5%; however, a 2.9% increase was observed between 2011 and 2012.

The proportion of First Nation Minto Mine employees (i.e., SFN and non-SFN) has fluctuated over the last three years, according to available data, from 24.2% in 2010 to 19.4% in 2011 and 21.6% in 2012.

[13] Data received from Minto, January 2010. No specific date was provided with the data file received.
[14] Data received from Minto, September 2012. No specific date was provided with the data file received.

Table 3.8 Minto Mine Aboriginal Employment Data (as of December 31), 2010, 2011, and 2012

Employee type	2010		2011		2012	
	Number (#)	Proportion (%)	Number (#)	Proportion (%)	Number (#)	Proportion (%)
Other First Nation Employees (not including SFN employees)	14	11.3%	15	10.8%	14	10.1%
SFN Employees	16	12.9%	12	8.6%	16	11.5%
Total Minto Mine Employees	128		133		139	

Source: Data provided by Minto.

The majority of the SFN beneficiaries employed at the Minto Mine resided in Whitehorse in both 2012 (40%) and 2010 (45%),followed by Pelly Crossing (2012: 27%; 2010: 23%), Carmacks (2012: 20%, 2010: 23%), and various other Yukon (2010: 9%) and BC communities (2012: 13%) (Table 3.9).

Table 3.9 Residence of SFN Beneficiaries Employed at the Minto Mine

City/Town of Residence	Number of SFN Employees	
	2010[13]	2012[14]
Pelly Crossing, YT	5	4
Haines Junction, YT	1	0
Whitehorse, YT	10	6
Dawson City, YT	1	0
Carmacks, YT	5	3
Campbell River, BC	0	1
Telegraph Creek, BC	0	1
Total	22	15

Source: Data provided by Minto.

It should be noted that in 2010 there was one, and in 2012 there were three Minto Mine employees who did not self-identify as a 'SFN beneficiary' but indicated that SFN was their home First Nation or resided in Pelly Crossing. These individuals were not considered as 'SFN beneficiaries' in any of the summary statistics presented in this baseline report.

Since 2007, a total of 32 SFN citizens have obtained employment with Minto at the mine ranging from professional to entry level positions (Table 3.10). The average length of employment for SFN Minto employees at the mine hired since 2007 (not including summer students) was 549 days. For those SFN employees who currently work at the mine, the average length of employment was 715 days, and for those no longer working at the mine (not including summer students) the average length of employment was 370 days. An examination of all SFN citizens employed by Minto at the mine since 2007 reveals that 38% worked less than 182 days (not including summer students), and that 28% worked at the mine for longer than a year (or 365 days). Two of the SFN citizens currently working at the mine have been employed since 2007.

Table 3.10 SFN Employee Positions Held at the Minto Mine (2007 to 2012)

#	Field of Work	Position	Employment Job Category
1	Environment	Environmental Monitor	Professional
2		Environment Officer	Professional
3	Site Services	Lead Hand	Skilled
4		Carpenter	Skilled
5	Human Resources	Human Resources Supervisor	Management
6		HR Assistant	Professional
7	Mill	Mill Labourer	Entry-level
8		Mill General Foreman	Skilled
9		Mill Operator	Semi-skilled
10		Tailings Labourer	Entry-level
11	Maintenance	Journeyman Mechanic	Skilled
12		Chief Electrician	Skilled
13	Mine	Mine Engineer	Professional
14		Mill Technician	Professional
15	Administration	Mine Accountant	Management
16		Warehouseperson	Semi-skilled

Source: Data provided by Minto.

In October 2012, there were 14 SFN citizens employed by Minto at the mine. These positions included: two environmental monitors, one electrical apprentice, one maintenance helper, one maintenance clerk, five mill (two labourers and three operators), two mine tech assistants, and three site services labourers.

Minto is committed to increasing SFN employment at the mine and with its contractors. Direct job opportunities at the mine are advertised in the SFN community newsletters and at meetings organized by the SFN-Minto Mine Employment Liaison Officer, as well as posted at the SFN Administration building in Pelly Crossing. Although SFN citizens of Pelly Crossing have expressed an interest in working at the mine, they perceive barriers to working there. Those perceived barriers have been described as:

1. the site is isolated and imposes separation from family;
2. there is limited information about job opportunities for women at the Minto Mine;
3. there is limited support on site for SFN employees; and
4. there are no traditional or cultural activities at the mine site for SFN citizens to participate in after work.

Minto Mine Contractor Employment

In total (i.e., the three contractors identified above along with other contractors at the mine) there were 108 permanent contractor employees working at the mine as of December 31, 2010; 118 as of

December 31, 2011; and 180 as of December 31, 2012. As is evident, there was a 67% increase in the number of permanent contractors between 2010 and 2012.[15] Employment data from 2010 to 2012 is summarized for three of the mine's permanent contractors (Pelly Construction, Sodexo, and Dumas) according to SFN employees, other First Nation employees, and non-First Nation employees (Table 3.11).

Table 3.11 Employment Data from Three Minto Mine Contractors, 2010 to 2012

Company	Pelly Construction			Sodexo			Dumas		
Year	2010	2011	2012	2010	2011	2012	2010	2011	2012
SFN	3	1	6	2	0	2	No data available	No data available	0
Other First Nations	16	17	17	10	21	10	No data available	No data available	6
Non-First Nations	55	61	71	10	10	21	No data available	No data available	26
Total Employees	74	79	94	22	31	33	No data available	No data available	32

Source: Data provided by Minto.

The proportion of First Nation employees employed by permanent contractors at the mine varied between 2010 and 2012. First Nation Pelly Construction employees comprised 23% of its workforce in 2010, 22% in 2011, and 25% in 2012. The proportion of First Nation employees employed by Sodexo was greater during this time with 55% in 2010, 61% in 2011, and 36% in 2012. In 2012, approximately 19% of the Dumas workforce was comprised of First Nation employees (Table 3.11).

The proportion of SFN citizens employed by each of the three contractors fluctuated between 2010 and 2012 (Table 3.11).

Pelly Construction approximately 4.5% of their employees at the Minto Mine were SFN in 2010, 1% in 2011, and 6.4% in 2012. For Sodexo approximately 9.1% of their employees at the Minto Mine were SFN in 2010, 0% in 2011, and 6.1% in 2012 (Table 3.11).

Additional data regarding First Nation employment by these three Minto Mine contractors (e.g., hiring policies, etc.) was not available for consideration.

Though access to data from all Minto Mine contractors was not available for consideration in this study six out of seven joint ventures between Minto and SFN had specific terms within their contract related to employment and/or fund arrangements with SFN. As these contracts are confidential, the specific terms of these arrangements was not available for consideration.

SFN Administration

The SFN Administration comprises a Chief and Council, as well as several departments: Government Services, Citizen Development, Finance, Health and Social Programs, Capital Programs, Lands and Resources, and Daycare. In total, there were 64 positions with the SFN Administration in December 2012, though nine of these positions were vacant (Table 3.12; T.L. Isaac, personal communication, December 14, 2012). This marks a 220% increase in SFN administration employment since 1994, when only approximately 20 SFN citizens were employed (Hallam Knight Piesold Ltd. 1994).

[15] It should be noted that the number of employees varies throughout the year.

Table 3.12 Summary of SFN Administration Positions

#	SFN Department	# of Positions
1	Chief and Council	7
2	Government Services	10
3	Finance	4
4	Health and Social Programs	10
5	Citizen Development	5
6	Daycare	4
7	Capital Works	8
8	Lands and Resources	10
9	Mining	3
10	Other	3

Yukon Government

The YG employs several individuals within the LSA who work in various service positions. These include employees at the Pelly Crossing Health Center (included two nursing staff positions, one full time clerk/receptionist position, and one janitor position in 2012), the Eliza Van Bibber School (i.e., eight teaching staff, one janitor/maintenance positions in 2012), and the Yukon College (i.e., two instructor/coordinator positions, and one janitor/maintenance position (shared with the Eliza Van Bibber School) in 2012).

Other LSA Employers

As stated in Section3.1.2, Pelly Crossing had eight businesses with a total of 13 employees in 2010 (YBOS 2011). Since business and employee data was available in 2007, the number of businesses in the community has ranged between a low of eight businesses (2008 and 2010) and a high of 10 businesses (2009) (Government of Yukon 2011). Further, the number of reported employees in Pelly Crossing has ranged between a low of 13 employees in 2010 and a high of 61 employees in 2007 (Government of Yukon 2011).

In August 2012, some of the private businesses operating in the LSA were: the Minto Resort, Selkirk Center, Gramma's Kitchen, SFN Artisans, two guide outfitter operations, the McCabe Farm, and the Pelly Farm. Although the number of jobs provided by these businesses is limited, economic diversity in the community is strengthened by providing a variety of opportunities that are relevant to the skills of local residents. Many local businesses have expressed enthusiasm for working together to provide services to the Minto Mine and community residents would like to see the mine make more local purchases and utilize more local businesses wherever possible. However, this desire is balanced against the fact that Pelly Crossing is currently a small community, with few services.

The federal government employs members stationed at the Royal Canadian Mounted Police (RCMP) detachment based in Pelly Crossing. This included two full time staff in 2012, though the detachment is supposed to have three staff members.

3.3 Employment Income

This section provides an overview of employment income in the RSA and LSA with a focus on Minto Mine-related income in the LSA.

Income-related data to the RSA (Yukon) and LSA (Pelly Crossing) was available from the 2001 and 2006 censuses, as well as from the Yukon Bureau of Statistics (YBOS), Minto, and some Minto contractors.

3.3.1 RSA

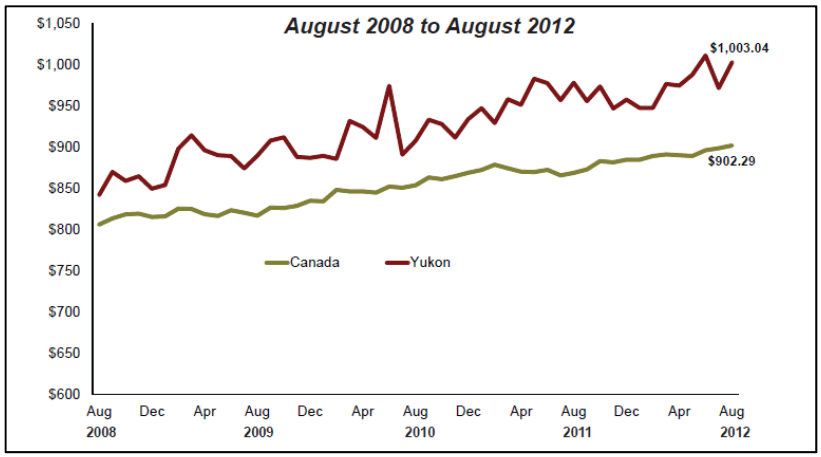
The most recent data related to the median total income is available from 2010 when Yukon's median total income was $86,930 in comparison to Canada's $69,860 at that time (Statistics Canada 2012e). Both Canada and Yukon have experienced an increase in total median income between 2006 and 2012 (Table 3.13).

Table 3.13 Summary of Canada and Yukon Total Median Income (All Census Families), 2006 to 2010

Area	Year				
	2006	2007	2008	2009	2010
Canada	63,600	66,550	68,860	68,410	69,860
Yukon	76,000	81,080	85,070	84,640	86,930

Source: Statistics Canada 2012e

In August 2012, the average weekly earnings (including overtime) of Yukon employees was $1,003.04, or $100.75 higher than the average Canadian weekly earnings (including overtime) (Figure 3.2). The average annual hourly wage in Yukon was $27.79 in 2012, which was $4.14 higher than the national average (YBOS 2013b).



Source: YBOS 2012c, p.4

Figure 3.2 Average Weekly Earnings, Including Overtime, Canada vs. Yukon

3.3.2 LSA

Census Canada data indicates that the median total income of persons 15 years of age and older in Pelly Crossing was $16,277 in 2000 and $23,680 in 2005, with earnings from income representing 81.6% and 86.9% of total income respectively (Statistics Canada 2003; Statistics Canada 2008). In addition, approximately 14.6 % of employed individuals in Pelly Crossing earned in excess of $60,000 per year in 2005, while 10.4% earned less than $10,000 per year (Statistics Canada 2003). There is no data available to indicate the average weekly earnings of Pelly Crossing residents.

Traditional activities continue to provide an important source of income substitution to many SFN citizens, as described in Section 3.12.

3.3.3 Minto Mine Related Income

Minto Mine related income can be earned directly by individuals through direct employment with Minto or indirectly through employment with contractors who serve the mine.

3.3.3.1 Minto

Minto paid approximately $11.7 million in employment income to its salaried mine employees in 2012, based on rates current as of September 2012.[16] Of this, approximately $3.5 million was paid to Yukon based employees, $6.8 million to British Columbia based employees, $740,000 to Alberta based employees, $270,000 to New Brunswick based employees, $100,000 to Nova Scotia based employees and less than $100,000 to employees from each of Manitoba, Newfoundland, and Ontario (Data received from Minto). In 2012 the average wage of Minto employees was $67,057 for those based in the Yukon and $85,228 for those based elsewhere in Canada.

The average income of First Nation Minto employees increased from $53,075 in 2010 to $60,307 in 2012 (Table 3.14). Minto employment income data for SFN citizens employed at the mine was only available for 2010 and 2012 (Table 3.14). The total income earned by SFN Minto employees was $1,106,000 in 2010, and $860,130 in 2012, a decrease of -22.2% (Table 3.14). The average annual income earned by SFN Minto employees increased by 14% from $50,272 in 2010 to $57,342 in 2012 (data received from Minto).

Table 3.14 Summary of SFN Minto Employee Income Data, 2010 and 2012

Wage Type	Amount ($CAD)	
	2010	2012
Total SFN income	$1,106,000	$860,130
Total First Nation income (including SFN)	$1,804,550	$1,929,831
Average First Nation income	$53,075.00	$60,307

Source: Data received from Minto.

Further, for SFN citizens working for Minto and residing in the LSA (Pelly Crossing), the average annual income was $50,000 in 2010 and $56,347 in 2012. For those SFN beneficiaries working for

[16] This summary does not include additional income that may be provided to employees through such sources as overtime, etc.

Minto residing in the RSA, the average annual income was $50,353 in 2010 and $57,447 in 2012(data received from Minto). The income of SFN citizens working for Minto and residing in the LSA increased by 12.7% between 2010 and 2012 while the income of SFN citizens working for Minto and residing in the RSA increased by 14.1%.

Although there is some concern that money earned from jobs at the mine can lead to spending on drugs and alcohol, there appears to be support for the opportunities created by Minto Mine-related income, including increased independence for the community.

Minto Mine Contractor Income

Minto Mine contractors employ RSA and LSA residents, as well as individuals outside of these areas. Income data from all mine contractors was not available for consideration in this report; however, data was available for Pelly Construction.

Since the mine initiated operations in 2007, Pelly Construction has employed First Nations, Yukon residents (including First Nations) and non-Yukon residents (Table 3.15). Specifically, in the last six years Pelly Construction has paid over $1 million in employment income to its SFN employees, which represents approximately 11.1% of the total First Nation employment income paid between 2007 and 2012 (Table 3.16).

Table 3.15 Pelly Construction Employment Income, 2007 to 2012

Year	Employee Type		
	First Nations	Yukon Residents (including First Nations)	Non-Yukon Residents
2007	$109,840	$295,430	$57,753
2008	$1,471,151	$3,939,057	$706,990
2009	$2,102,192	$5,600,376	$924,771
2010	$1,692,055	$4,340,424	$1,178,201
2011	$2,014,576	$4,918,246	$1,766,040
2012	$1,798,254	$4,176,141	$1,703,224

Source: Data received from Minto.

Table 3.16 Pelly Construction Employment Income Data for SFN employees, 2007 to 2012

Year	Total SFN Income ($)
2007	34,032.00
2008	122,160.00
2009	251,989.37
2010	116,250.63
2011	191,842.00
2012	304,678.00
Total	1,020,952.00

Source: Data received from Minto.

3.4 Royalties and Donations

One of the ways in which Minto supports communities throughout the RSA is through financial donations. This includes a $30,000 donation to the Whitehorse General Hospital in 2010 towards their magnetic resonance imaging (MRI) machine.Minto also provides financial donations to the SFN within the LSA. Since 2009, Minto has provided donations to the SFN community totalling approximately $61,000 to support a variety of initiatives including community wellness, cultural activities, recreation, school trips for youth, and travel to different events and activities.

Additional income is provided to the SFN through royalties from Minto. As the mine is located on SFN Category A Settlement Land, where the SFN owns both surface and mineral rights, 100% of royalties are transferred to the SFN (Yukon Government 2012). Royalties are paid every year that Minto Mine operations return a profit (Yukon Government 2012). Since 2008, Minto has paid $12.6 million in royalties to the SFN (Yukon Government 2012).

In July 2012, all SFN citizens over the age of 21 received an individual, one-time royalty payment from the SFN Administration (INT 06). For those citizens under the age of 21 at that time, their allotment was put into trust until they became 21 years of age.

There was some controversy generated in Pelly Crossing amongst SFN citizens as a result of the 2012 one-time royalty payment. Although some citizens acknowledged the benefits of additional income for purchasing expensive consumer items or paying down debts, other citizens observed that there were social problems resulting from the payment. These included a lack of interest in necessary annual community jobs (such as wood cutting), increased bootlegging and alcohol use in the community, an increased number of court cases, and more “outsiders” present in the community, amongst other issues.

3.5 Traditional Economy

Income from traditional activities contributes to the well-being of SFN citizens in Pelly Crossing. Although the skills required to pursue traditional economic activities must be learned over time, SFN citizens shared that their ability to depend on the land and its resources is vital to their economic future. Though no quantitative data was identified to describe the current value of the SFN traditional economy or the proportion of SFN citizens involved, it is estimated that a portion of many of the SFN family’s annual income is derived from traditional activities including trapping, hunting, fishing, berry picking, and creating crafts and other goods (i.e., mukluks, baby clothes, dolls) (Yukon Government 2004). These products may be sold, used for subsistence purposes, or traded.

SFN citizens interviewed in this Study shared that many still actively engage in traditional use activities throughout the year (INT17, INT10, INT09, INT18, INT26, INT27). Though quantitative data was not collected regarding the contribution of the traditional economy at the individual income level, one SFN citizen shared that they estimated that half of their annual income was dependent on the traditional activities (INT25); this included furs sold from trapping, meat harvested through hunting, trapping, and fishing, as well as goods and products created from traditional use activities (i.e., using hides and furs to make and sell goods and products) (INT25). Another SFN citizen shared

that approximately 25% of the meat eaten by their family was harvested through traditional use activities (INT29).

When discussing potential barriers to engaging in the traditional economy, some SFN citizens shared that they do not have the time to partake as much as they would like to in traditional activities due to a lack of time (INT27, INT29). This barrier to harvesting has been identified as a significant challenge in other Canadian Aboriginal communities; one study conducted with the Little Red River Cree Nation found that 52% of respondents felt that a lack of time limited their involvement in harvesting (Nelson *et al*. 2005).

3.6 Community Stability

The VSEC of community stability considers the potential for the Project to influence changes to community demographics (i.e., size, composition, mobility) and in turn, community stability. To provide the baseline required to assess this VSEC, this section addresses population and demographics, particularly population, age distribution, mobility, and family make-up.

Population and demographic data was available from the Yukon Bureau of Statistics and Statistics Canada (Census data from 2001, 2006, and, for certain conditions, Census 2011). Population data for the SFN was accessed from Aboriginal Affairs and Northern Development Canada (previously known as “Indian and Northern Affairs Canada”) First Nation profiles.

3.6.1 Population and Age Distribution

3.6.1.1 Population

RSA and LSA

Yukon had a population of 33,897 in 2011, which was 11.6% and 18.2% greater than the 2006 and 2001 populations, respectively (Statistics Canada 2012; Statistics Canada 2007). Whitehorse, the largest population centre in Yukon, had a population of 27,323 in June 2012 (YBOS 2012). This was Whitehorse’s highest recorded population in the past six years and comprised 76% of Yukon’s population at that time. Population growth in Whitehorse is a major influence on the territory’s overall growth. As shown in Table 3.17, Yukon and key LSA and RSA communities experienced overall population growth between 2001 and 2011.

Table 3.17 Census Populations 2001 to 2011

Community	Population (#)			Population Change (%)
	2001	2006	2011	2001 to 2011
Yukon	28,674	30,372	33,897	18.2%
Whitehorse	21,405	22,898[17]	23,276	8.7%
Carcross	152	331	289	90%
Carmacks	431	425	503	16.7%
Minto	N/A[18]	N/A	N/A	N/A

[17] The 2006 Whitehorse population data was referenced from the 2006 Census (Statistics Canada 2007b).
[18] Official population data for Minto is not available from the Yukon Bureau of Statistics or Canada Census data.

Community	Population (#)			Population Change (%)
	2001	2006	2011	2001 to 2011
Pelly Crossing	328	296	336	2.4%

Source: Statistics Canada 2012; Statistics Canada 2012b; Statistics Canada 2012c; Statistics Canada 2012d; Statistics Canada 2007; Statistics Canada 2007b; Statistics Canada 2007c; Statistics Canada 2007d.

Of particular note are the population fluctuations in Pelly Crossing. Though the population only increased by 2.4% between 2001 and 2011, a 9.8% population decrease was experienced from 2001 to 2006, followed by a 13.5% increase between 2006 and 2011 (Table 3.17). These fluctuations follow a 37.8% population increase between 1996 and 2001, when the population grew from 238 to 328. In June 2012, the population of Pelly Crossing was 332 (YBOS 2012). According to the 2006 Census, approximately 85% of the population of Pelly Crossing is of Aboriginal identity compared to approximately 18% in Whitehorse and 25% in Yukon (Statistics Canada 2007; Statistics Canada 2007b).

SFN

The 2006 Census data is the latest census data available for the SFN population (Table 3.18); however, more recent data is available from Aboriginal Affairs and Northern Development Canada (AANDC) First Nations profiles.

The total registered population of the SFN was 576 citizens in December 2012, a 24.7% increase from the 462 citizens registered in December 1993 and a 13.2% increase from the 509 registered in December 2009 (AANDC 2012; Minto 2010; Hallam Knight Piesold Ltd. 1994). In December 2012, approximately 49.8% of the total registered SFN population lived on SFN "own crown land", and approximately 44.1% lived "off reserve" (AANDC 2012).

Table 3.18 2006 SFN Population Distribution

Name	Year	Census Data		Total in Canada	Within Home Community		Within Yukon – Excluding Home Community		Outside Yukon	
		Yes	No		#	%	#	%	#	%
SFN	2006	Yes		425	225	52.9	120	28.2	80	18.8

Source: Government of Yukon and Statistics Canada. n.d.

The population growth shown in the population statistics is recognized by Pelly Crossing residents. As stated by an SFN citizen residing in Pelly Crossing, the community growth is noticeable; "…the community has grown. There did not used to have people living on the Pelly Farm Road or on the other side of the Pelly Crossing Bridge" (11EARS_08132010). Though specific factors contributing to the decision of individuals were not determined, it was indicated that recent population increases might be related to SFN citizen entitlement to Minto royalties. They shared that applications for SFN membership have increased since awareness of these benefits were made public.

3.6.1.2 Age Distribution

RSA and LSA

Yukon has the largest proportion of work force aged individuals and the smallest proportion of seniors of Western Canadian provinces and Canada as a whole (Figure 3.3).

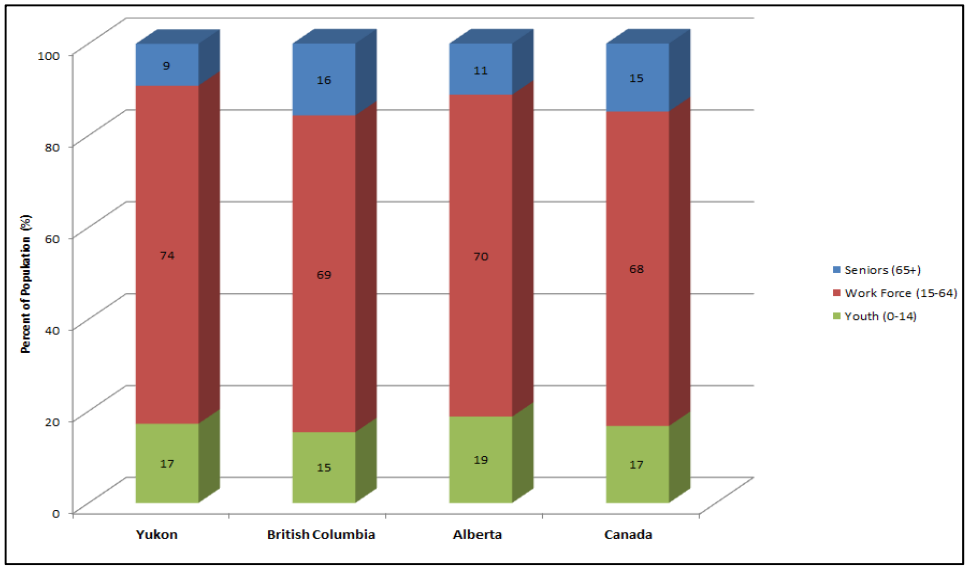


Figure 3.3 Age Distribution in Yukon, British Columbia, Alberta and Canada

At the time of the 2011 Census approximately 17.3% of individuals in Yukon were aged 0 to 14 years and 9.1% of individuals were aged 65 years+. The remaining 73.6% of the population comprised the work force aged population (aged 15 to 64). In comparison, the work force aged demographic comprised 73.7% of the Whitehorse population, 72.4% of the Carcross population, 69.0% of the Carmacks population, and 73.1% of the Pelly Crossing population.

Although Pelly Crossing historically had a younger population than Yukon, the median age increased notably from 30.9 in 2001, to 35.4 in 2006 and to 38.3 in 2011 (Table 3.19). During the same time, the median age in Yukon, which was considerably higher than that of Pelly Crossing in 2001, increased from 36.1 in 2001 to 38.4 in 2006 and to 39.1 in 2011. By 2011, the difference in median age between Yukon and Pelly Crossing had fallen to 0.8 of a year compared to a difference of 5.2 in the year 2001.

Although the median age of males in Pelly Crossing was lower than females in 2001 (30.6 compared to 31.2) it was higher in 2006 (35.6 compared to 35.2) and the difference was even more notable in 2011 when the media age of men was 39.2, the same as the median age for men in Yukon (Table 3.19). In 2006 the median age of women was 36.2 compared to 39.1 for Yukon as a whole.

Table 3.19 Median Age in the Pelly Crossing and Yukon Populations (2001, 2006, 2011)

Population	Group	Year		
		2001	2006	2011
Pelly Crossing	Men	30.6	35.6	39.2
	Women	31.2	35.2	36.2
	Total	30.9	35.4	38.3
Yukon	Men	36.4	38.8	39.2
	Women	35.8	38.1	39.1
	Total	36.1	38.4	39.1

Source: Statistics Canada 2012; Statistics Canada 2007; Statistics Canada 2002.

The age structure of Pelly Crossing and Yukon for the last three Census periods and the percent change between Census periods are shown in Table 3.20and Table 3.21, respectively. As is evident, both Pelly Crossing and Yukon experienced a general decrease in the percentage of the population under the age of 25 and an increase in the percentage of the population over 25 between 2001 and 2011. Of particular note, Pelly Crossing experienced a decrease of 6.3% in the portion of the population aged 0 to 14 compared to a decrease of 3.7% in Yukon for the same age group. Also, 2011 was the first Census period in which the percentage of those aged 15 to 19 was higher in Pelly than in Yukon overall. Furthermore, in 2011 the percentage of both the Pelly Crossing and Yukon populations in the 25 to 44 and 45 to 54 year age groups was very similar, whereas there were notable differences in the past (Table 3.20). The one age group where Yukon experienced a more notable change than Pelly Crossing was in the 55 to 64 year age group where the percentage of the population in that age group increased by 5.8% in Yukon from 2001 to 2011, but by only 2.8% in Pelly Crossing (Table 3.20; Table 3.21).

Table 3.20 Pelly Crossing and Yukon Age Demographics, 2001, 2006, 2011

Age Demographic	2001		2006		2011	
	Pelly Crossing	Yukon	Pelly Crossing	Yukon	Pelly Crossing	Yukon
Total Population (#) /Age Group	330	28,675	295	30,375	335	33, 895
0-14 (%)	24.2	21.0	20.3	18.8	17.9	17.3
15-19 (%)	7.6	8.0	6.8	7.5	9.0	6.5
20-24 (%)	7.6	5.7	8.5	6.2	7.5	6.6
25-44 (%)	34.8	33.0	32.2	28.8	28.4	28.1
45-54 (%)	12.1	17.7	13.6	19.2	17.9	18.0
55-64 (%)	7.6	8.6	11.9	12.0	10.4	14.4
65-74 (%)	3.0	4.0	6.8	4.8	6.0	6.1
75+ (%)	3.0	2.0	0.0	2.7	6.0	3.1

Source: Statistics Canada 2012; Statistics Canada 2007; Statistics Canada 2002

Table 3.21 Age Demographic Changes in the Pelly Crossing and Yukon Populations, between Census Periods (2001, 2006, 2011)

Age Demographic	2001 to 2006		2006 to 2011		2001 to 2011	
	Pelly Crossing	Yukon	Pelly Crossing	Yukon	Pelly Crossing	Yukon
Total Population (#) /Age Group	330	28,675	295	30,375	335	33,895
0-14 (%)	-3.9	-2.2	-2.4	-1.5	-6.3	-3.7
15-19 (%)	-0.8	-0.5	+2.2	-1.0	+1.4	-1.5
20-24 (%)	+0.9	+0.5	-0.9	+0.4	-0.1	+0.9
25-44 (%)	-2.6	-4.2	-3.8	-0.7	-6.4	-4.9
45-54 (%)	+1.5	+1.5	+4.3	-1.2	+5.8	+0.3
55-64 (%)	+4.3	+3.4	-1.5	+2.4	+2.8	+5.8
65-74 (%)	+3.8	+0.8	-0.8	+1.3	+3.0	+2.1
75+ (%)	-3.0	+0.7	+6.0	+0.4	+3.0	+1.1

Source: Statistics Canada 2012; Statistics Canada 2007; Statistics Canada 2002

SFN

The percentage of SFN citizens in the 35 to 54 age group (i.e., 30.5% for SFN and 30.4% for all Yukon First Nations) is similar to that of Yukon First Nations (Table 3.22). However, as shown in Table 3.22 and illustrated in Figure 3.4, there are notable differences in the younger age groups. Specifically, the percentage of the SFN population compared to Yukon First Nations overall is 5.2% lower in the 0 to 14 age group, 5.9% higher in the 15 to 24 age group and 4.2% lower in the 26 to 34 age group (Figure 3.4). The most notable difference between the SFN population and that of Yukon First Nations in 2006 was observed in the 15 to 24 age group where SFN had the highest percentage of its population in this category at 22.4%, compared to 16.5% for Yukon First Nations (Table 3.22). The percentage of the population was more consistent in the 25 to 44 age group with Pelly Crossing having the highest percentage of population in this age group at 32.2% and the SFN having the lowest percentage of their population in this age group at 27.0%. However, data for Yukon First Nations and the Yukon overall supports the fact that the First Nations population is younger overall as 21.7% of the Yukon First Nations population is in the 45 to 64 age group compared to 31.2% of the Yukon population (Table 3.22).

Table 3.22 SFN and Yukon First Nation Age Demographics (%), 2006

Age Demographic	Selkirk First Nation (SFN)		Yukon First Nations	
	Population (#)	Population (%)	Population (#)	Population (%)
Total Population	425	100	6,535	100
0-14	90	21.2	1,725	26.4
15-24	95	22.4	1,080	16.5
25-34	40	9.4	890	13.6
35-44	75	17.6	1,070	16.4
45-54	55	12.9	915	14.0
55-64	40	9.4	500	7.7
65+	20	4.7	360	5.5

Source: Government of Yukon and Statistics Canada, n.d.

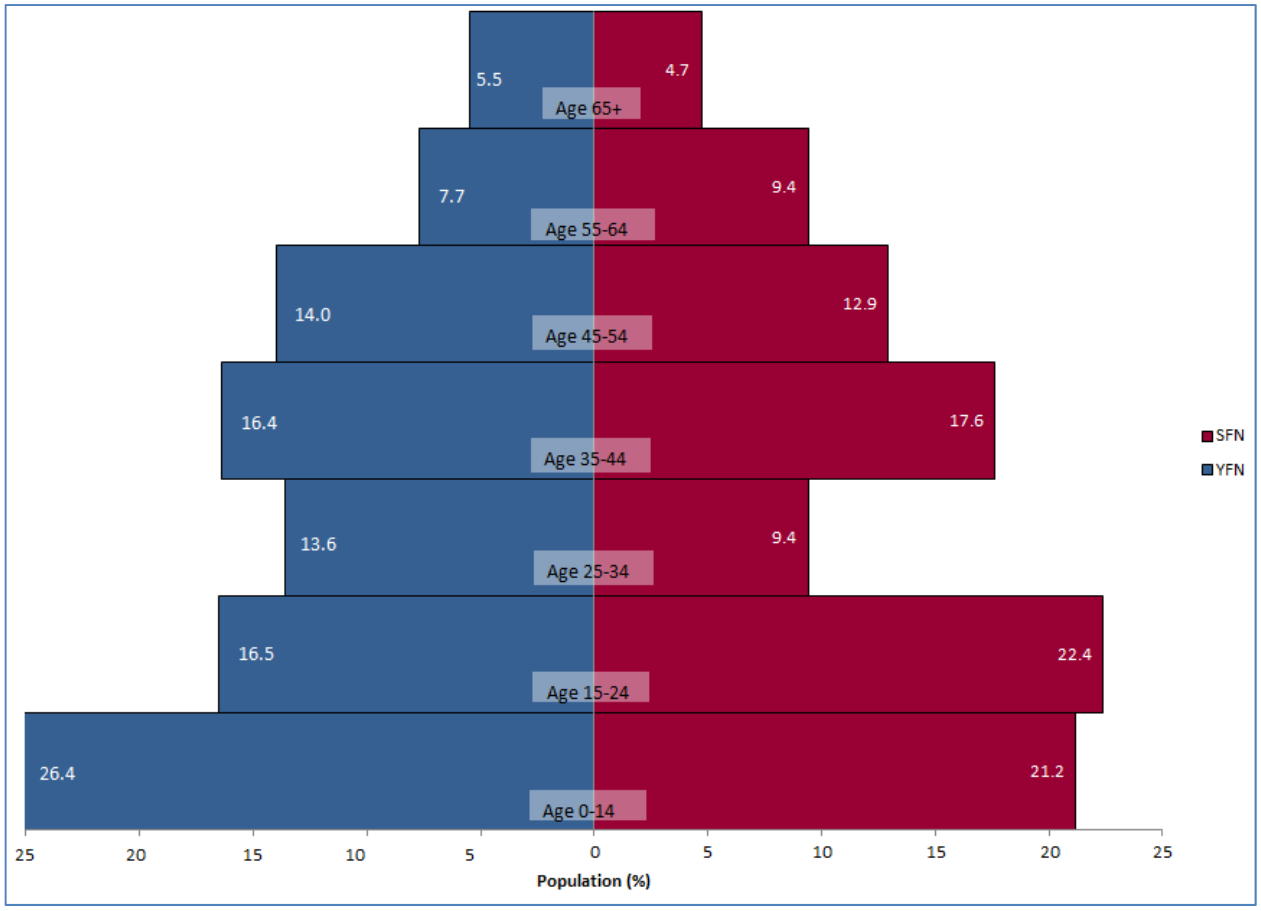


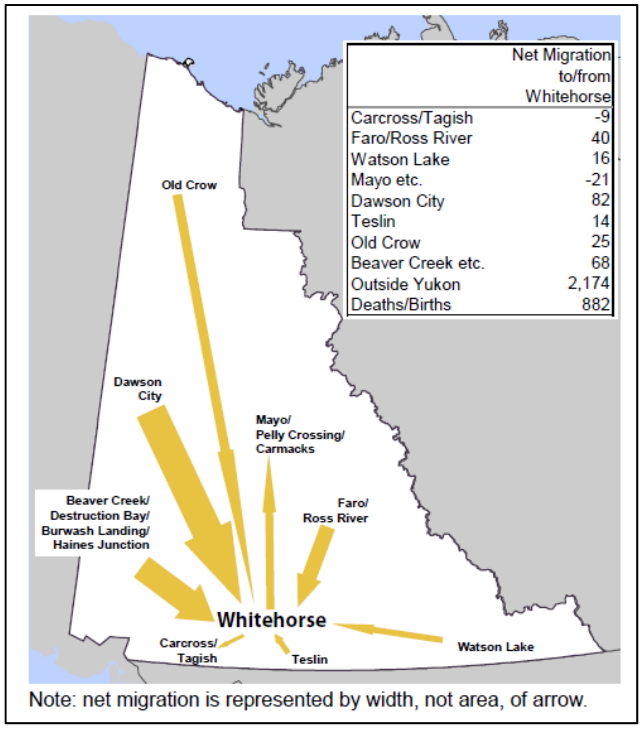
Figure 3.4 Comparison of Yukon First Nation and SFN Populations, 2006

3.6.1.3 Population and Age Projections

Based on the 2009 to 2011 reference period, the Yukon Bureau of Statistics anticipates that Yukon's population will grow by 6,532, or 18.5% by 2021 (YBOS 2011). While the percentage of youth (under the age of 15) is expected to remain relatively constant (under 16%), the percentage of working-aged individuals (between the ages of 15 and 64) is expected to decrease from 75.2% in 2011 to 70.0% in 2021 as the "baby boom" generation retires (YBOS 2011). As this generation ages, the 65+ years of age demographic is expected to increase from 9.0% to 14.8% between 2011 and 2021 (YBOS 2011).

3.6.2 Mobility

Data available from the Yukon Bureau of Statistics related to net migration reveals that between 2005 and 2010, 1,466 people moved between Yukon communities (YBOS 2011b). Figure 3.5 illustrates net migration between Whitehorse and Yukon communities during this time period (YBOS 2011b). Migration data for Minto is not available.



Source: YBOS 2011b.

Figure 3.5 Migration between Whitehorse and Communities, 2005 to 2010

Pelly Crossing is a relatively stable community, with 87.9% and 86.2% of residents living at the same address for one year or longer in 2006 and 2001, respectively, compared to 83.4% and 81.5% in Yukon for the same time periods (Table 3.23; Statistics Canada 2007; Statistics Canada 2002).

Table 3.23 Place of Residence 1 and 5 years ago (# and %) (2001 and 2006 Census)

Mobility Status	Population							
	Pelly Crossing				Yukon			
	2001		2006		2001		2006	
	1 yr ago	5 yr ago	1 yr ago	5 yr ago	1 yr ago	5 yr ago	1 yr ago	5 yr ago
Total population 1 year and over	325	300	290	280	28,210	26,795	29,910	28,460
Lived at the same address	280 (86.2%)	150 (50.0%)	255 (87.9%)	175 (62.5%)	23,005 (81.5%)	13,760 (51.4%)	24,950 (83.4%)	15,680 (55.1%)
Lived within the same province or territory	35 (10.8%)	110 (36.7%)	30[19] (10.3%)	80[20] (28.6%)	3,950 (14.0%)	8865 (33.1%)	3,820[21] (12.8%)	8,645[22] (30.4%)
Lived in a different province, territory, or country	0	40 (13.3%)	10 (3.4%)	20 (7.1%)	1255 (4.4%)	4170 (15.6%)	1155 (3.9%)	4,135 (14.5%)

Source: Statistics Canada 2007; Statistics Canada 2002.

[19] Includes 15 individuals who stayed within the same census subdivision (same municipality), and 15 individuals who changed addresses from another subdivision (different municipality) within the same province or territory.
[20] Includes individuals who stayed within the same census subdivision (50 same municipality), and 30 individuals who changed addresses from another subdivision (different municipality) within the same province or territory.
[21] Includes 3,205 individuals who stayed within the same census subdivision (same municipality), 615 individuals who changed addresses from another subdivision (different municipality) within the same province or territory.
[22] Includes 7,110 individuals who stayed within the same census subdivision (same municipality), 1,535 individuals who changed addresses from another subdivision (different municipality) within the same province or territory.

SFN citizens shared during interviews some of the various reasons for leaving and moving back to the Pelly Crossing community, including that some SFN citizens moved away from Pelly Crossing to pursue post-secondary opportunities and that others have moved back to Pelly Crossing in hopes to gain employment at the Minto Mine (INT09).

3.6.3 Family Make-up

In 2011 and 2006 the average number of persons in a family was 2.8 and 2.9, respectively, in both Pelly Crossing and Yukon (Statistics Canada 2012; Statistics Canada 2007). An examination of the percentage of lone-parent families in Pelly Crossing has been increasing over the past three Census periods and is higher than the Yukon average; in 2001, 22.2% of families in Pelly Crossing were lone-parent families in comparison to 19.8% in Yukon at this time (Statistics Canada 2002). In 2006 and 2011, this family-type increased to represent 31.3% and 38.9% of Pelly Crossing census families, in comparison to 20.7% and 20.5% in Yukon, respectively (Statistics Canada 2012; Statistics Canada 2007). Of particular note is the fact that in 2001, 2006, and 2011 single female led families comprised 22%, 25%, and 22% respectively of total families in Pelly Crossing, and only 16%, 15%, and 15% respectively in Yukon (Statistics Canada 2012; Statistics Canada 2007; Statistics Canada 2002).

At the time of the 2001, 2006, and 2011 Census, residents of Pelly Crossing were more likely to be in a common-law relationship than Yukon residents overall. In 2001, 32% of the Pelly Crossing population over the age of 15 was in a common-law relationship, in comparison to 16% in Yukon (Statistics Canada 2002); this was also observed in 2006 (27% in Pelly Crossing vs. 16% in Yukon) and 2011 (29% in Pelly Crossing and 17% in Yukon) (Statistics Canada 2007; Statistics Canada 2012).

3.7 Housing

This section provides an overview of permanent and temporary housing in the RSA and LSA, with a focus on the existing housing conditions in the LSA.

Housing-related data is presented from primary data sources and various housing-related reports.

3.7.1 RSA

Housing in Yukon is currently considered to be in a state of crisis and an impediment to economic growth, with the anticipated demand for housing expected to continually increase as the economy expands and mining and other sectors develop further (DPRA 2011). In 2011, it was estimated that the housing supply in Whitehorse was more than a decade behind demand (DPRA 2011). In addition to a lack of housing, housing in Whitehorse is aging; in 2006, over 62% of the Whitehorse housing supply was assessed as being 25 years or older (DPRA 2011).

Permanent accommodations is Yukon is comprised of privately owned, YG, and First Nation government housing. The majority of private and other residential housing stock in the RSA is located in Whitehorse with smaller numbers of housing units available in other communities. Communities throughout the RSA and LSA include YG housing. YG housing is administered by the Yukon Housing Corporation for the YG, and includes housing for YG rural employees and social housing (including private non-profit housing, rent supplement, and public not-for-profit social housing). First Nation

governments also provide housing for their citizens throughout Yukon, with the nature of housing varying by community.

Temporary accommodations (e.g., hotels, motels, etc.) are also concentrated in Whitehorse.

3.7.2 LSA

3.7.2.1 Permanent Accommodation

Housing in the LSA is concentrated in Pelly Crossing, though there are some residences (including both seasonal and permanent) located in Minto. The majority of housing in the LSA is comprised of SFN residential housing, with a limited number of privately owned residences and temporary accommodation units.

In 2012 there were 133 SFN residential housing units located in Pelly Crossing throughout the main village (48 houses), the Willow Creek subdivision (22 houses), and the Jon Ra subdivision (63 houses including three duplexes). There were also four privately owned houses and 11 YG staff houses in Pelly Crossing (T.L. Isaac, personal communication, December 14, 2012; Yukon Housing Corporation 2012).

SFN citizens must apply to the SFN Administration for SFN residential housing. In 2012, it reportedly took an average of five years to be assigned a home once the required application was complete (INT 12). In 2013, SFN citizens residing in SFN housing will begin paying a monthly rent of $60/home to the SFN Administration (INT18). This marks the first time that citizens have had to pay rent for SFN housing (INT18).

The SFN Administration is working to build homes to meet demand, which currently exceeds supply (INT12). In 2011, the SFN Capital Works Department reportedly built 16 homes, and in 2012, three homes and three duplex units were built (INT12). Plans to expand the Jon Ra residential subdivision located on the north side of the Pelly River across the bridge from the main village are ongoing to meet the high demand for housing in the community. The amount of housing in Pelly Crossing has increased by approximately 37% from 1994, when there were only approximately 100 houses in the community (Hallam Knight Piesold Ltd. 1994).

At the time of the 2007 ICSP, housing issues in Pelly Crossing were considered to be related to:

- affordability and housing suitability;
- administration;
- design, construction and maintenance; and
- capacity of First Nations to maintain existing housing stock and meet future demands (p.4).

The 2007 ICSP also presented an assessment of housing conditions in Pelly Crossing from 2000 (Inukshuk Planning & Development 2007) wherein the condition of 96 homes was assessed as either:

- good: did not require repairs other than regular maintenance;
- fair: required significant repairs (e.g., plumbing, etc.);

- poor: required “extensive and major repairs such as re-wiring”; or
- replace.

The assessment found that 18 homes (18.8%) were in good condition, 59 were in fair condition (61.5%), 17 were in poor condition (17.7%), and two needed to be replaced (2.1%) (Inukshuk Planning & Development 2007).

There are approximately six residences in Minto, of which two are occupied seasonally. These residences are occupied by SFN and non-SFN citizens, with non-SFN citizens residing in privately owned residences. There is no YG housing in Minto.

3.7.2.2 Temporary Accommodations

Temporary accommodations are available in Minto (i.e., Minto Resort) and Pelly Crossing (i.e., Pelly River Crossing Campground and the Selkirk Centre).

The Minto Resort provides seasonal accommodations for camping and RVs. During the 2012 season, approximately six to seven campers and two to three RVs used the resort each week (INT14). The resort mainly caters to the cruise ship industry, but does not provide accommodations to these guests.

The Pelly River Crossing Campground provides sites approximately 30 sites for campers and RVs in Pelly Crossing, and is overseen by the SFN Administration. The Selkirk Centre has six motel rooms with kitchenettes available and is privately owned (INT05). Vacancy rates at the motel fluctuate throughout the year depending on activities in the area. Information on campground use is not available. The owner of the Selkirk Centre shared that there has been no observed change in customers or the amount of business since the Minto Mine became operational in 2007, but that there is an interest to explore opportunities for developing business further by serving the Minto Mine (INT05).

3.8 Health Status and Services

Health services in the RSA and LSA are provided by various health care facilities. Healthcare in Whitehorse, the health care center of Yukon, is provided by the Whitehorse General Hospital, a public health office, and two continuing care facilities. Healthcare in the remainder of the RSA and LSA is provided predominately by community nursing in community health care facilities. The remainder of this section focuses on LSA health and health care services.

3.8.1 Health Status

There is limited public statistical information related to the health and health conditions of the Pelly Crossing and SFN communities. Through this study’s primary data collection, it was learned that diabetes education in the community is one of its major health focuses (INT08). The SFN participated in Phase 1 (2002/2003) and Phase 2 (2008/2010) of the First Nations Regional Health Survey which documented information about the health and health conditions of the community at those times. This data is not currently accessible; however Minto and SFN are working to establish the necessary

parameters to access this data and potentially consider it to help define a more detailed health baseline and help define the determinants of health in Pelly Crossing and for the SFN.

3.8.2 Health Services

Health services in the LSA are located in Pelly Crossing and are provided through the Pelly Crossing Health Centre, a social worker, and emergency medical and fire services. SFN has a Department of Health and Social Programs that provides a variety of health-related services, alongside SFN citizens who commonly practice traditional medicine.

3.8.2.1 Pelly Crossing Health Centre

The Pelly Crossing Health Center is a public health facility administered by the YG that provides care to the Pelly Crossing community (the most common clientele), tourists, and residents from nearby communities. Mine employees have not placed a large demand on the Health Center to date (INT08).

The Health Center provides a variety of medical services for all ages, including: basic x-rays, lab services, general health exams, medical/wellness programs, Worker's Compensation Board assessments, vaccines and immunizations as well as a variety of other programs. No permanent dental or counselling services are available in Pelly Crossing. A SFN community Tuberculosis Worker, based out of the Pelly Crossing Health Center, provides support to tuberculosis patients residing in Pelly Crossing (INT07).

The Health Center is considered to be a 'pre-hospital' setting, for those requiring more comprehensive medical attention. The Health Centre has one trauma room, two treatment rooms, and a small dispensary (INT08). Medical equipment and amenities are available at the center to support specialists visiting the community (e.g., doctor, dentist, etc.). The Health Center is equipped to facilitate Yukon tele-health services from Whitehorse including: an Alcoholics Anonymous program and diabetes education.

The Health Center is open year-round from Monday to Friday between the hours of 8:30 am to 5:00 pm and is staffed by a permanent nurse in charge, in addition to administrative and support staff. During the course of the Study in 2012, the Center was understaffed with only one of the two permanent nurse-in-charge positions filled. Doctors travel to the Pelly Crossing once a week and dentists travel to the community every couple of months (INT08).

3.8.2.2 Emergency Medical Services

Emergency health services are provided by the Pelly Crossing emergency medical services (EMS) team which is responsible for an area that extends south approximately half way to Carmacks, and north to approximately Stewart Crossing via the Klondike Highway. The Carmacks and Mayo ambulance services may provide backup to the Pelly Crossing emergency medical services, if necessary. In the event that an emergency medical incident occurs on a waterway, the emergency medical services team must work with the RCMP, as they are not permitted to enter bodies of water to provide services (INT07).

The Pelly Crossing EMS team was comprised of an 11 member volunteer crew and an EMS Supervisor in August 2012, and is dispatched through the Health Center (INT07). Nurse(s) and RCMP member(s) in Pelly Crossing also provide additional emergency medical support, when required.

The EMS team has a fully equipped ambulance housed at the Pelly Crossing Fire Station and attends incidents that vary from sprained ankles to motor vehicle accidents. If urgent medical attention is required, the ambulance may bring patients to the Mayo airport or to the Pelly Crossing helicopter landing pad for transport to Whitehorse. The Pelly Crossing helicopter landing pad is located approximately five miles north of the main village, but is only operational in the winter, due to soft summer ground conditions (INT07).

During the primary data collection, it was noted that alcohol related incidents are the most common incidents that emergency service providers dealt with (INT07). It was also noted that traffic related incidents tend to be higher in the summer due to increased traffic levels.

The Pelly Crossing EMS team has not, to date, worked on any emergency medical incidents at the mine.

The mine is supported by its own emergency response team on site, and is fully equipped to respond to emergency incidents. The Minto Mine Emergency Response Plan is distributed within the LSA to such partners and community groups as the SFN (Pelly Crossing), the Pelly Crossing Health Center, and the Carmacks Health Center (Minto Explorations Ltd. 2011).

3.8.2.3 Traditional Medicine

Many types of traditional medicines are harvested, gathered and used by SFN citizens (INT17). SFN citizens shared that many conditions (e.g., arthritis, cataracts, diabetes, infections) are treated with traditional medicine. It was also shared that to collect certain medicinal plants, one had to go to particular places and follow traditional Dooli[23] practices when gathering medicinal plants, such as covering the earth with a blanket and having a ceremony. Furthermore, for special medicines, they explained, you can't just dig the plant out. You have to pray and give thanks afterwards.

Trapline #145 is actively used for harvesting and gathering traditional medicines including spruce pitch and labrador tea. No specific areas for gathering traditional medicines within the bounds of trapline #145 or elsewhere were shared with the research team, though SFN citizens did note that some gathering areas did change as a result of the Minto Mine and that the Minto area is used for the gathering of traditional medicine.

3.9 Education and Training

This section describes the educational attainment levels of the largest LSA community of Pelly Crossing, using the most recent data available from Statistics Canada, Yukon Education reports, and primary data sources. This section focused on the Pelly Crossing, as current education and training services and opportunities provided in this community have the greatest potential of influencing the

[23] The Dooli Law is unique to the Northern Tutchone peoples (Mease 2008). Dooli are sacred and spiritual laws that direct and guide people about "something that you must not do" (Mease 2008). The Dooli laws govern all aspects of the Northern Tutchone life including such activities as fishing, fish camp protocols, hunting, and land and resource management (Mease 2008).

levels and types of employment opportunities available for SFN citizens at the Minto Mine, as Pelly Crossing is the administrative center for the nation.

Education and training is an important value to SFN, as well as to Minto and its contractors. As such, training related initiatives and programs provided by Minto and its contractors are also described.

3.9.1 Educational Attainment

Table 3.24 provides a summary of the Pelly Crossing education attainment in 2006. As is evident, approximately 46% of Pelly Crossing residents had no certificate, diploma or degree compared to approximately 23% for Yukon overall (Statistics Canada 2007).

Table 3.24 Summary of Pelly Crossing Education Level, 2006

Education Level	Pelly Crossing			Yukon		
	Total # (%)	Male # (%)	Female # (%)	Total # (%)	Male # (%)	Female (%)
Population 15 years and over	240	130	110	24,490	12,285	12,205
No certificate, diploma or degree	110 (45.8%)	65 (50.0%)	40 (36.4%)	5,550 (22.7%)	3,120 (25.4%)	2,430 (19.9%)
High School Certificate or equivalent	45 (18.8%)	25 (19.2%)	20 (18.2%)	5,810 (23.7%)	2,600 (21.2%)	3,205 (26.3%)
Apprenticeship or Trades Certificate or Diploma	25 (10.4%)	15 (11.5%)	10 (9.1%)	2,890 (11.8%)	2,145 (17.5%)	740 (6.1%)
College, CEGEP or other non-university certificate or diploma	40 (16.7%)	15 (11.5%)	25 (22.7%)	5,060 (20.7%)	2,170 (17.7%)	2,885 (23.6%)
University Certificate or Diploma below the Bachelor Level	0	0	10 (9.1%)	830 (3.4%)	280 (2.3%)	555 (4.5%)
University certificate, diploma or degree	25 (10.4%)	10 (7.7%)	10 (9.1%)	4,350 (17.8%)	1,965 (16.0%)	2,380 (19.5%)

Source: Statistics Canada 2007.

The low level of educational attainment and low rate of graduation from grade 12 in Pelly Crossing is a concern to SFN citizens. Steps are being taken with a view to increasing education levels through enhanced education and training opportunities as discussed in the following subsections.

3.9.2 Service Providers

Education and training opportunities in the RSA and LSA are provided by various educational institutions and training providers. Programs in the RSA are concentrated in Whitehorse with individual communities being home to schools and, in some cases, remote Yukon College campuses.

Educational opportunities in the LSA are available in Pelly Crossing, primarily through the Eliza Van Bibber School and the Yukon College. Minto is working with the SFN Education Department, local educational institutions, and the YG to develop and support opportunities for SFN citizens.

Employment-oriented training programs in the LSA are administered through a number of different initiatives including those sponsored by SFN, YG, Minto and Minto contractors.

3.9.2.1 Eliza Van Bibber School

The Eliza Van Bibber School provides primary and secondary level education (kindergarten to grade 12). In 2013, a total of 55 students were enrolled at the Eliza Van Bibber School (K. Clarke, personal

communication, January 14, 2013), as presented in Table 3.25, student enrolment has fluctuated over recent years. Four SFN students will be graduating from grade 12 in 2013 with two being from the Eliza Van Bibber School and the other two are SFN students attending school in Whitehorse (P. Berrel, personal communication, April 11, 2013).

Table 3.25 Eliza Van Bibber School Annual Enrolments, May 2001 to May 2012 (YBOS 2011b)

Year	Number of Students	Year	# of Students
2001	65	2007	50
2002	57	2008	65
2003	60	2009	57
2004	71	2010	58
2005	69	2011	45
2006	59	2012	46

Source: Government of Yukon 2013.

In the 2011-2012 school year, approximately ten SFN students between kindergarten and grade 12 attended school in Whitehorse (Yukon Education n.d.).

The Eliza Van Bibber School has faced significant staff turnover in the last few years (Yukon Education 2012; Yukon Education n.d.). In October 2012, eight teaching staff worked at the Eliza Van Bibber School, including classroom teachers, learning assistants, and counsellors (INT19). With the exception of kindergarten, each teacher was teaching more than one grade (i.e., one teacher for grades one and two; one teacher for grades three, four and five; one teacher for grades six and seven; one teacher for grades eight and nine; and one teacher for grades 10,11 and 12) (INT19).

Ongoing goals of the school in 2012 include “re-establish[ing] stability, consistency, and trust within the school [and to] increasing the involvement of parents, school council, community and Elders in the school” (Yukon Education 2012, p. 2). The 2012/2013 growth plan outlines literacy and academic achievement as two of its priorities. Improving academic achievement involves a holistic approach that includes improving student learning conditions through initiatives such as the breakfast and hot lunch programs (INT19).

The 2012/2013 Growth Plan notes that progress is being made to enhance student graduation rates and that student achievement was a priority focus area for the school (Yukon Education n.d.). Specific efforts to realize this goal include having a teacher assigned to the grade 10, 11, 12 class, providing information to parents and students about the graduation program, and assessing academic progress to ensure legitimate student achievement (Yukon Education n.d.). This report indicated that the Pelly Crossing community had concerns about how students were being graded as it was observed that students transferred to Whitehorse schools were “dropped a grade level” as they were not able to complete the level of work required for their grade (Yukon Education n.d., p.2). This report indicated that in the 2010/2011 school year, four of five students who wrote their British Columbia Provincial science 10 exams passed, and three of five students passed their British Columbia Provincial math exam (Yukon Education n.d.).

The Eliza Van Bibber School and Minto are working together to expand opportunities such as class trips to the mine site and credited work experience programs for senior students that provide students opportunities to observe and learn about the variety of careers available at the mine. Minto

has also provided donations to the School to support opportunities such as school trips (e.g., a trip to Edmonton for grade 10 , grade 11 , and grade 12 students to Edmonton for the Dreamcatcher Aboriginal Youth Conference) (INT19).

3.9.2.2 Yukon College

The Yukon College Pelly Crossing community campus, known as *Hets'edan Ku'* (learning house) in the Northern Tutchone language, offers community-based post-secondary educational and training opportunities. The Pelly Crossing campus is the busiest Yukon College campus per capita in the Yukon and the second busiest overall after the Watson Lake campus (INT06). Courses and programs offered at the college are developed to reflect the SFN community needs and interests. The college works closely with the SFN Chief and Council to identify relevant courses and programs (INT06). Both academic and vocational programs are provided by the college.

The Pelly Crossing campus employs two community-based instructors. Additional instructors may travel to the community to provide particular courses and/or programs, if required. The Pelly Crossing campus is equipped with video teleconferencing equipment to facilitate remote courses using video technology. The campus computer lab is equipped with computers and related equipment for students. The campus offers one hour of 'open community computer use time' each day for Pelly Crossing community members.

Courses and programs vary in duration and cost. Large scale courses (e.g., cooking, plumbing, house maintenance) are typically administered as full time courses that are 15 weeks in length (INT06). Student funding is typically provided through college and SFN funding support (INT06). The college also provides courses and programs focused on heritage and culture, as well as youth employment. Enrolment data was not available for consideration in this Study.

Minto is currently working in partnership with the Yukon College and the Yukon Mine Training Association to develop apprenticeship and internship opportunities.

3.9.2.3 SFN Education Department

The SFN Education Department works with local educational institutions and others, such as Minto, to provide support and programming that meets the educational needs of its citizens. The Department offers a number of programs including:

- support for SFN kindergarten to grade 12 students in Pelly Crossing and Whitehorse;
- programs, services and specific funding to assist SFN citizens with post-secondary education, employment, and training;
- school supply funding, post-secondary grants and high school achievement awards;
- support for persons with disabilities;
- summer student employment program;
- employment insurance claimants training fund; and
- self-employed workers business development program.

The objective of these programs is to help increase the employability of SFN citizens and help strengthen and support diversification of the local economy.

3.9.2.4 Yukon Territorial Government (Pelly-Carmacks Training Fund)

The Pelly-Carmacks Training Fund is a YG initiative that provides funds to support employment-related training and upgrading of employment-related skills for residents of Pelly Crossing, Carmacks, and Braeburn (Yukon Education 2012b). This fund is managed by a regional committee that includes representatives from the municipal government, First Nations, Yukon College, and communities (Yukon Education 2012b).

3.9.2.5 Minto and Minto Mine Contractors

Minto is committed to providing training opportunities that facilitate the development of skills and careers with Minto and/or its contractors. Minto contractors are committed to hiring, training, and advancing the careers of local residents, wherever possible. For example, Pelly Construction has had success hiring and advancing its employees through such positions as labourer, truck driver, operator, and first line supervisor. A variety of training initiatives are currently offered and in the process of being established by Minto and its contractors, examples of which are provided in Table 3.26.

Table 3.26 Examples of Minto and Minto Contractor Training Initiatives, 2012

Training Initiatives	Description
	Minto
Minto Mine Summer Student Employment Program	The Minto Mine summer student employment program is an annual initiative that operates between June and August. Students work a four day on, three day off rotation during the program. Summer students do not stay at the Minto Mine camp, as transportation is provided to and from Pelly Crossing every day. Through this program, students receive the Minto Mine "big five training" which includes Workplace Hazardous Materials Information System (WHMIS), Hot Work, Lock Out, Confined Space Entry, and Working from Heights training (C. Gray, personal communication, November 23, 2012). Students who complete the Minto Mine summer employment program may be given preferential hiring status following completion of their schooling. Students are rotated through various roles on site (site services labour, data entry, water sampling, basic carpentry, event preparation, filing, general office work, site clean-up, etc.), and given an overview of all departments to help their understanding of the mine's operations. Five students participated in the program in 2012, and four in each of the previous two years. Since the program was initiated in 2009, one student has since become employed by the Minto Mine. As most of the program's students are still in high school or starting college, the effect of the program cannot yet be fairly assessed.
Pre-Mining Program with the Centre for Northern Innovation in Mining (CNIM) and Yukon College	This program is intended to act as a fundamental "talent bridge" within the north, by advancing the skills of local candidates (through training that teaches basic work skills and an understanding of camp life); thus providing increased opportunity for Yukoners to obtain entry level positions.
Pre-apprenticeship Program	This program is developed, in part, with Minto Mine contractors as a phased apprenticeship program.
Underground Mining	This training program will support the development of Minto's underground operations, and is focused on developing the internal capabilities of current and prospective employees to sustain the growth pattern of Minto Mine site.

Training Initiatives	Description
SFN On-the-job Training	Positions are being developed at the Minto Mine for SFN citizens that do not require previous related experience and that offer on-the-job training to successful applicant(s). A recent example includes a position for an SFN Environmental Monitor in 2012.
Yukon College Partnership	The Yukon College and Minto have recently (late 2012) started working together to organize skill training opportunities such as 'heavy equipment' operator training. There are plans to initiate training programs in 2013.
On-the job Training	A variety of on-the-job training programs are provided including those listed following this table.
Professional Development	Minto supports professional development as an opportunity to enhance the skills and knowledge of its employees and meet the evolving needs of the organization as well as to keep current in their profession.
Pelly Construction	
Finning Trainer	A Finning-certified trainer was hired in November 2012 to support staff at the mine.
In-house Training	Pelly Construction also regularly conducts ongoing in-house training programs to facilitate the continued development of its employees. An example of such a program includes the "Compressive Operator Training Courses" which involve manuals, lesson plans, and Microsoft Office® PowerPoint® presentations about all the equipment on site.
Sodexo	
In-house Training	Sodexo provides in-house training programs including: Food Safe; Workplace Hazardous Materials Information System (WHMIS); Safe Operating Procedures for On Site Equipment; Introduction to Health and Safety Program; Personal Protective Equipment; Slips, Trips and Falls; Proper Lifting and Back Safety; Hazard Reporting; Lock Out and Tag Out; and, Accident Reporting.

Source: Data provided by Minto.

On-the-job training programs at the Minto Mine include:

- Mill Trainee Program
- Big 5 Training (Hot Work, Confined Spaces, WHMIS, Lock Out/Tag Out, Fall Protection)
- Rigging and Hoisting Training
- First Aid Training
- Fire Extinguisher Training
- Emergency Mine Rescue Training
- Driving Training
- Onsite Computer Training
- Queens University Supervisor Training
- Bear Awareness
- Joint Occupational Health & Safety
- Zoom-Boom operations
- Barge Deckhand
- Shop's Master 60 Ton
- Fall Arrest Training
- Ice Rescue Technician
- Surface Mine Rescue
- Mill Operator
- HAZMAT Training
- Equipment Training

With a view to furthering opportunities for LSA and RSA residents and other employees, Minto and its contractors are developing training opportunities in partnership with the Yukon College, the Yukon Mine Training Association, Mile 918 Driver's School, and the Northern Safety Network for delivery of industry training. Minto is also working with the SFN as described earlier.

3.10 Community Well-Being

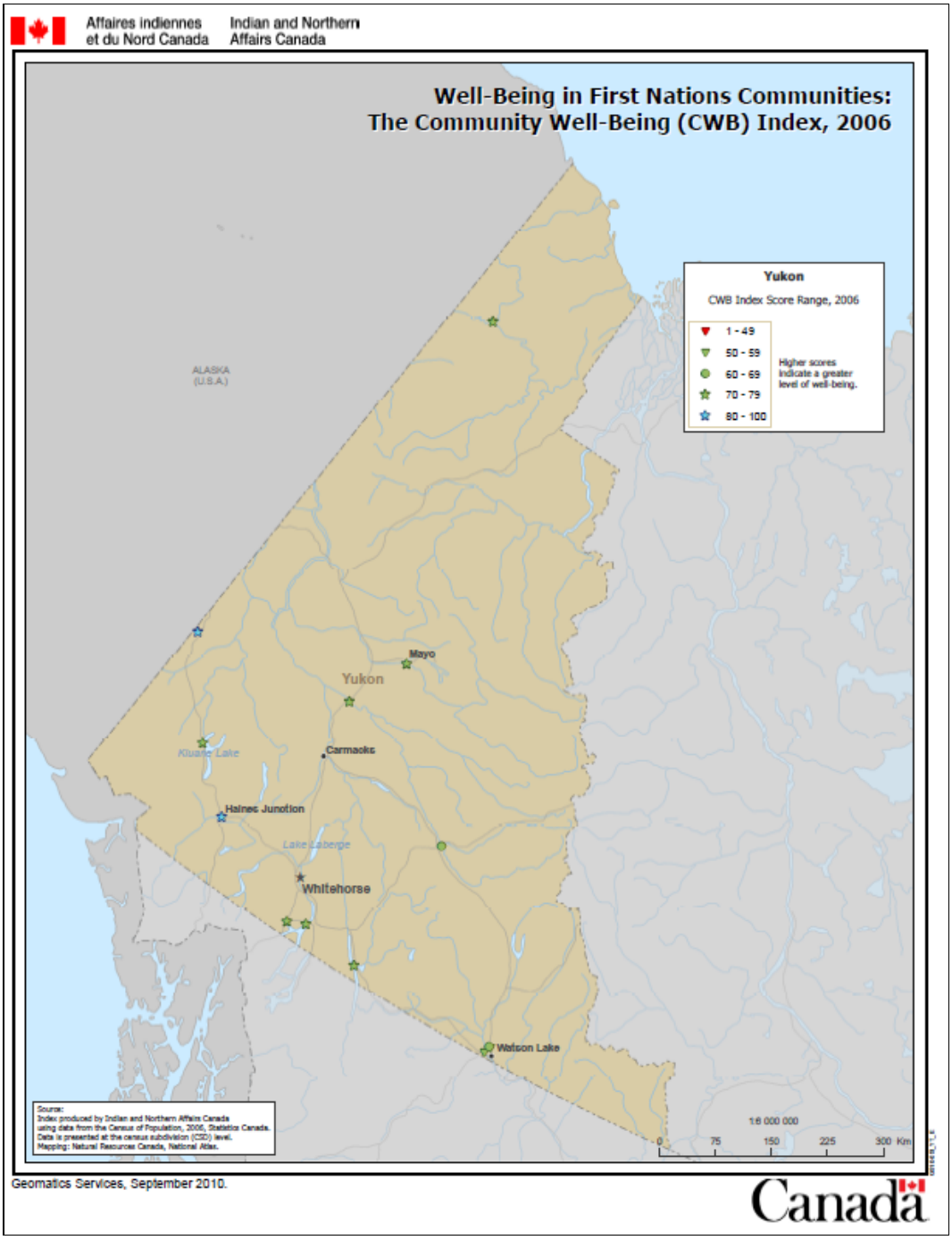
This section discusses community well-being from both the perspective of Statistics Canada's Community Well-Being (CWB) Index and the SFN.

3.10.1 Community Well-Being Index

Community well-being was assessed in 2006 as part of the Statistics Canada's Community Well-Being (CWB) Index. This index focuses on social and economic well-being and determines CWB based on employment, education, income, and housing in communities. Scores for CWB can range between 0 (lowest well-being) to 100 (highest well-being) (Aboriginal Affairs and Northern Development Canada 2012b).

First Nation communities were examined separately from non-Aboriginal communities; however comparing the two types of communities does help identify trends (Aboriginal Affairs and Northern Development Canada 2012b). On average, First Nation communities had CWB scores that were 20 points lower than non-Aboriginal communities (Aboriginal Affairs and Northern Development Canada 2012b). In 2006, CWB scores ranged between 64 and 87 for non-Aboriginal communities (N=3860), and between 39 and 77 for First Nation communities (N=537) (Aboriginal Affairs and Northern Development Canada 2012b). The non-Aboriginal communities of Whitehorse and Carmacks had respective CWB scores of 85 and 70, and the First Nation communities of Carcross and Pelly Crossing had CWB scores of 74 and 71, respectively (Table 3.27).

Out of the 13 First Nation communities considered in the 2006 CWB Index, seven communities scored between 70 and 79; Carcross and Pelly Crossing were two of these communities (Figure 3.6; Aboriginal Affairs and Northern Development Canada 2012c). Table 3.27 summarizes the CWB scores for the RSA and shows that the lowest scoring component of the 2006 CWB assessment was the education score.



Source: Aboriginal Affairs and Northern Development Canada 2012c.

Figure 3.6 Yukon: Well-Being in First Nations Communities: The Community Well-Being Index 2006

Table 3.27 Summary of Community Well-Being for the RSA and LSA

Community	2006 Income Score	2006 Education Score	2006 Housing Score	2006 Labour Force Activity Score	2006 CWB Score	2006 Population	Type of Collectivity
Whitehorse	92	64	93	90	85	20290	Other
Carcross	81	49	86	78	74	335	First Nation
Carmacks	76	44	74	84	70	425	Other
Pelly Crossing	80	43	78	82	71	295	First Nation

Source: Aboriginal Affairs and Northern Development Canada 2011.

3.10.2 SFN Community Well-Being

The CWB score for SFN is available based on the 2001 Census, in which they scored 80 (Indian and Northern Affairs Canada 2008).[24] In comparison, the average First Nations score at that time was 79, the average non-First Nations average score was 86, and the lowest community score was 69 (Indian and Northern Affairs Canada 2008).

Community well-being is defined differently by every community but generally refers to the environmental, social, and economic conditions that support a quality of life that promote the health and well-being of all residents The 2007 Integrated Community Sustainability Plan for SFN/Pelly Crossing stated that overall community well-being was considered to be comprised of the following facets: self-government empowerment, education, increased governance capacity, and economic diversification (Inukshuk Planning and Development 2007). The vision for SFN's future was stated as:

> … *for a strong community, one that promotes the health and wellness of our Citizens, including our water, lands and resources. We see a healthy community as one where our Citizens look after their own health, take pride in their culture, and one where Citizens help build effective self-government through economic prosperity* (Inukshuk Planning and Development 2012, p. 7).

The SFN faces challenges similar to other northern Aboriginal communities attempting to maintain and revitalize cultural values while participating in the wage economy and managing large-scale resource developments on, or near, their traditional territories. Emotional well-being, social cohesion, and cultural well-being were identified as being values of particular importance to SFN community wellness during the primary data collection associated with this Study. Interviewees shared that supporting the development of positive self-esteem and self-confidence was important to achieving a healthy emotional well-being. They also shared that social cohesion amongst the SFN community and cultural well-being were important aspects of community well-being. Supporting cultural activities, events and initiatives that promote the sharing and teaching of cultural knowledge and the Northern Tutchone language is a priority for the SFN community.

As noted earlier, Minto is working with SFN through the tripartite Socio-economic Working Group to further define wellness, so that this VSEC can be monitored and assessed in the future. Furthermore, Minto and SFN are working to determine how Minto may contribute to SFN community wellness. To date, Minto has provided in-kind financial donations to cultural activities, events, and initiatives that

[24] Please note, as the 2001 CWB score was assessed for SFN, and was assessed for Pelly Crossing in 2006, these scores may not be directly comparable.

support various aspects of community wellness, including: a traditional dance group, sponsorship to attend a spiritual development event, and funding to support SFN citizens attending various cultural events.

No quantitative data is available to characterize the current condition of community well-being in Pelly Crossing and the SFN; however, qualitative primary data was available to inform the current condition of community well-being for the SFN. Aspects of well-being that were identified through the qualitative analysis were: emotional well-being, social cohesion, and cultural well-being. It is also important to note that community well-being is a dynamic, complex concept, and that the aspects used to characterize community well-being may change over time. Items discussed below in terms of community well-being are not an exhaustive list of the items that could affect community well-being.

3.10.2.1 Emotional Well-being

Interviewees shared that an important component of community well-being was emotional well-being. They shared that supporting the development of positive self-esteem and self-confidence was important to achieving healthy emotional well-being. Some ways suggested that emotional well-being could be supported in Pelly Crossing included: providing life skill development opportunities (INT14), teaching members to be independent and self-sufficient (INT18, INT26), creating job opportunities that instil a sense of pride and self-reliance (INT18), and providing community training programs that contribute to capacity, skill, and self-confidence development (INT06).

3.10.2.2 Social Cohesion

Community members shared that social cohesion amongst the community was an important aspect of community well-being. This included supporting intergenerational relationships between members, and providing opportunities for community members to share experiences together through various organized community events and activities.

Several means of supporting the development of intergenerational relationships were shared including: family meetings (INT09), traditional use activities (INT09, INT10, INT29), cultural activities (such as potlatches) (INT09), and the Community Hot Lunch Program (INT17). These are examples of some of the initiatives that bring members of different generations together to develop and strengthen relationships.

Many types of organized community events and activities in Pelly Crossing were described by interviewees as contributing to the social cohesion of the community. These events and activities included the Selkirk Spirit Dancers (INT09), a cooking program for mothers (INT02), a drum making workshop (INT02), a fiddle program (INT02), community hand game tournaments (INT09), the community garden (INT26), and recreation department community events and activities (INT02).

3.10.2.3 Cultural Well-being

Cultural well-being is an important component of the well-being of the SFN community and is discussed in Section 3.13 as a separate VSEC.

3.10.3 Other Contributors to Community Well-being

3.10.3.1 Services and Infrastructure

Communities in the RSA and LSA area offer a range of infrastructure and services related to health, justice, education, safety, and emergency services, general infrastructure and services (e.g., banks, post office, community hall, garbage services, water delivery, churches, etc.), recreation, and social services, among others, to their residents. The nature of RSA and LSA infrastructure and services vary from community to community. Community infrastructure and services in Pelly Crossing are provided by the SFN Administration, the Yukon Territorial Government, and private companies. A limited amount of infrastructure is available at Minto including the SFN general assembly grounds where the SFN conducts its annual general assembly, the Minto Mine barge landing and access road, and the Minto airstrip.

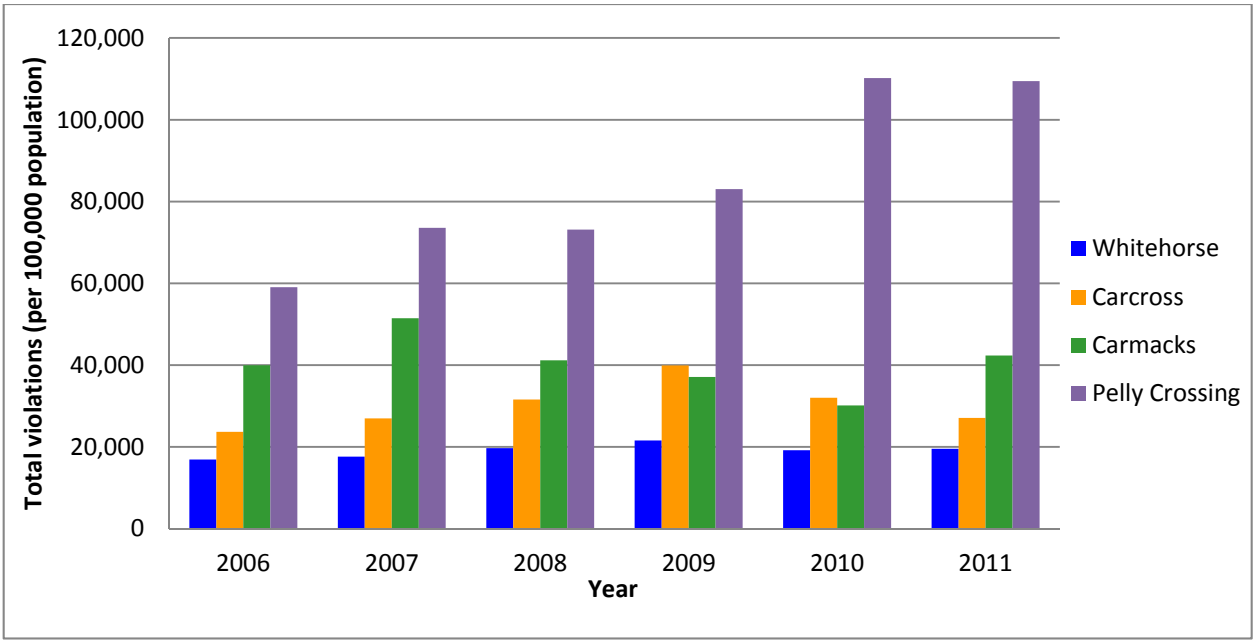
Key services are discussed in more detail in the sub-sections that follow.

Justice

Overview

Police service in the LSA and RSA is provided by the RCMP. Crime rates (measured as the total number of violations per 100,000 people) varied throughout the LSA and RSA from 2006 to 2011 (YBOS 2012d; YBOS 2012e; YBOS 2012f; YBOS 2012g). Pelly Crossing had the greatest number of total criminal code violations per 100,000 people between 2006 and 2011, and Whitehorse had the least (Figure 3.7; YBOS 2012d; YBOS 2012e; YBOS 2012f; YBOS 2012g). In all years between 2006 and 2011, Carmacks had the second highest number of total criminal code violations per 100,000 people, with the exception of 2009 and 2010 (YBOS 2012d; YBOS 2012e; YBOS 2012f; YBOS 2012g).

Pelly Crossing experienced the greatest increase in total criminal code violations between 2006 and 2011, increasing by 85%.



Source: YBOS 2012d, YBOS 2012e, YBOS 2012f, YBOS 2012g

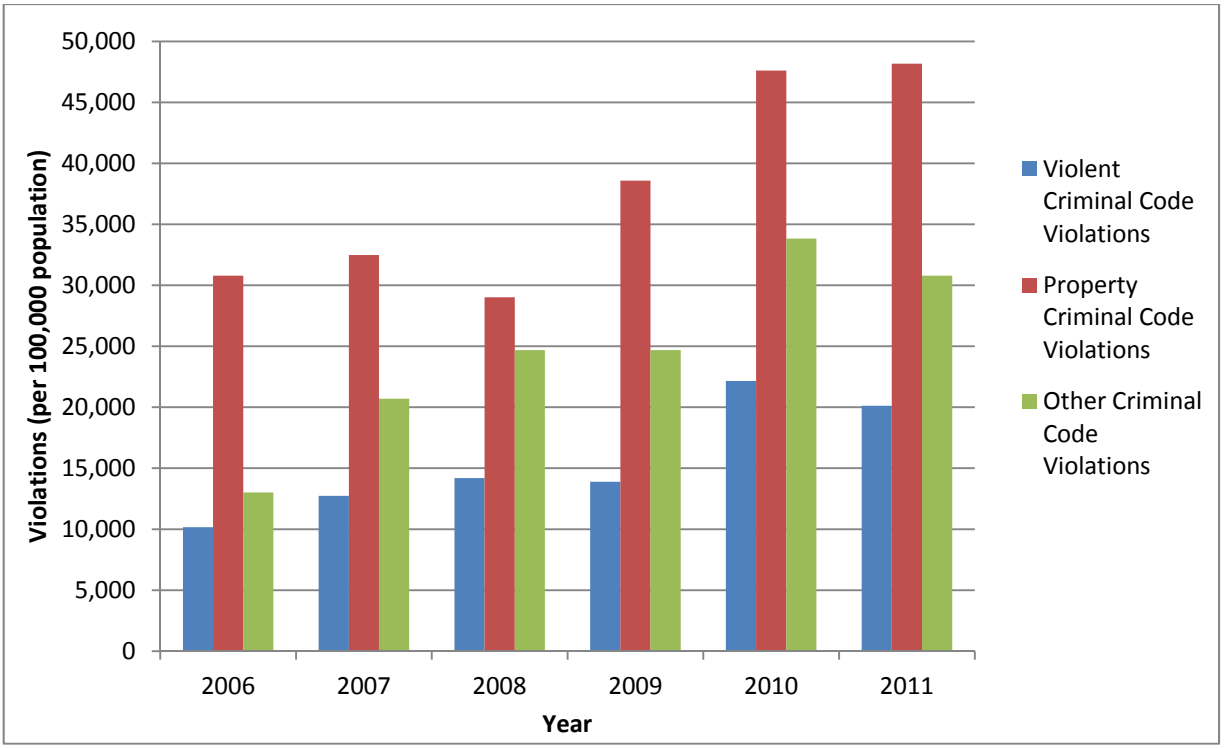
Figure 3.7 Summary of Crime Rates (per 100,000 population) in the LSA and RSA from 2006 to 2011

Pelly Crossing

The Pelly Crossing RCMP detachment serves Pelly Crossing and surrounding area with the service jurisdiction of the detachment covering an area 50 km south and north of Pelly Crossing via the Klondike Highway. As of the summer of 2012, the detachment was understaffed with only two of three positions being filled (RCMP, personal communication, August 15, 2012).

Pelly Crossing has had the highest number of total violations, in comparison to other communities in the RSA, between 2006 and 2011, and has been increasing during this time (Figure 3.7; YBOS 2012d, YBOS 2012e, YBOS 2012f, YBOS 2012g). Property crimes are the most prevalent in Pelly Crossing, followed by "other" crimes, and then by violent crimes (Figure 3.8, YBOS 2012d). Community court is held in Pelly Crossing on a monthly basis.

In the past, the SFN community has used a traditional circle system as a culturally appropriate way of supporting individuals with justice-related issues; however this system was not active in Pelly Crossing during the summer of 2012 when this Study was conducted (INT18).



Source: YBOS 2012d

Figure 3.8 Summary of Crime Rates in Pelly Crossing by Type, from 2006 to 2011

Fire Protection Services

Fire protection services are provided by the Pelly Crossing volunteer Fire Department. The Fire Department operates out of its own facility which also houses its equipped fire truck and gear. In October 2012 there were approximately eight volunteer fire fighters who comprised the department.

Social Services

Social services are provided to the Pelly Crossing community by the Mayo/Pelly Crossing Regional Social Worker, funded by the YG. There is no designated social service office in Pelly Crossing, thus the social worker visits the homes of clients or meets with them in public meeting spaces (INT11NC). The social worker works approximately three days a week in Pelly Crossing and works closely with the SFN Health and Social Programs Department to provide the following services:

- adult protection services;
- child welfare/child protection services;
- social Assistance (for non- Aboriginal community members); and
- youth probation/youth justice services.

Adult protection-related services, social assistance-related services and Youth probation/youth justice-related services are not commonly accessed by members of the Pelly Crossing community (INT11NC). Social assistance-related services are not commonly accessed as Aboriginal community members are provided social assistance services through the SFN Administration. Youth probation/justice-related services are only available to individuals under the age of 18. Between 2010 and the summer of 2012, there were less than five clients that accessed adult protection, social assistance, and youth probation/justice services in Pelly Crossing (INT11NC).

Child Welfare and child protection services are the most commonly used service provided to the Pelly Crossing community by the Regional Social Worker (INT11NC).

Community Services

A variety of other services are available in the community including a day care, library, hot lunch program, and recreational services and activities.

Community Daycare

The Dunya Ra K'ats Inte Ku Daycare in Pelly Crossing is licensed to provide daycare services for up to 30 children from the age of infants. Daycare staff are exempt from childcare training requirements, but the center does have a training plan in place and are working towards compliance (Government of Yukon 2013b).

Community Library

The Pelly Crossing community library is co-located with the Eliza Van Bibber School library, and is open 12.5 hours per week throughout the year (INT19, INT16). Community members can sign out books, magazines, DVDs, and other materials. The library also has three computers that have unrestricted internet access (INT 19, INT16). The largest user group is school children (INT 19, INT16).

Community Hot Lunch Program

The Community Hot Lunch Program provides hot lunches to Eliza Van Bibber students, SFN Elders and community members (INT21). The program operates Monday to Friday from 12 pm to 1 pm on school days, and has been ongoing for the past four to five years (INT21). The program is expected to expand in the near future to include an Elders program in the afternoon (INT21).

Recreational Services and Activities

There are many recreational programs and facilities available in Pelly Crossing including a baseball park, community garden, curling rink, indoor skating rink, the Pelly River Crossing Campground, recreation center and gym, school park, skateboard park, swimming pool, community garden, and youth center. Pelly Crossing recreational activities include a cultural dance group known as "the Selkirk Spirit Dancers" which perform locally and internationally to promote SFN culture.

3.10.3.2 Transportation and Access

Minto Mine

Access from the Klondike Highway to the Minto Mine barge landing on the east side of the Yukon River is currently maintained by Minto. The barge landing facilitates access to the Minto Mine during the summer months, by barge, and by an ice bridge in the winter. Employees at the Minto Mine live on site and work shifts of two weeks on and two weeks off. They are transported to and from the site in commercial buses from Whitehorse when the barge or the ice bridge is in operation. There are two scheduled buses a week to and from Whitehorse, and smaller vans from Pelly Crossing one to two times a week.

Every year there is an approximate four to six week period of time during the freeze-up and break-up of the Yukon River, where the Minto Mine is not accessible by vehicle. During this time, personnel are flown to site from Whitehorse via a charter air service that lands on the Minto Mine's 1,300m airstrip located at the mine (two to three flights per week). During the four to six week winter 'freeze-up' and spring 'break-up' periods on the Yukon River, when the barge and ice bride are not operational, concentrate is stored to be transported later.

The Minto Mine barge landing is also known to be used as boat launch for recreational boaters and local guide outfitting operations.

The Minto Mine access road from the west side of the Yukon River to the Minto Mine site is a 27 km long all-weather gravel road. The access road is suitable for heavy transport traffic. The access road crosses Big Creek, a Yukon River tributary, via a single-lane steel span bridge made of concrete.

Pelly Crossing

Local road maintenance is largely provided by the SFN in Pelly Crossing, with the exception of some areas that are under the jurisdiction of the YG (Precision Research Services 2009). Pelly Crossing roads are largely surfaced by gravel or bituminous surface treatment (Precision Research Services 2009).

There is no public transportation available in Pelly Crossing.

Traffic

Table 3.28 presents the traffic count data for Carcross and Carmacks, two of the communities located along the Minto Mine's main transportation corridor, the Klondike Highway. This data shows that there has been little change in the traffic volume over the last 18 years or so (Yukon Highways and Public Works 2011).

Table 3.28 Klondike Highway Traffic Counts (1993/1994, 2011)

Location	Average Summer Daily Traffic (ASDT) Count		Average Daily Traffic (ADT) Count	
Carcross North	803 (1993)	886 (2011)	814 (1993)	821 (2011)
Carmacks North	403 (1993)	435 (2011)	239 (1994)	295 (2011)

Source: Yukon Highways and Public Works 2011.

Data related to the type of traffic (cars, trucks, etc.) using the Klondike Highway was collected in 1999 and 2000. In those years, truck traffic comprised 1.5% and 2.2%, respectively of the total traffic (Yukon Highways and Public Works 2011).

The ADT volume experienced in different parts of Yukon varies greatly depending on each specific location being examined and the time of year that the counts are taken. The ASDT count is derived from averaging traffic data between May 1 and September 30 of each respective year. As seen in Figure 3.9, the ADT volume within the LSA on the Klondike Highway ranges between 150 and 299 vehicles a day. In the RSA, traffic volumes vary between an average of between 150 and 299 vehicles a day in some areas, to over 2400 vehicles a day (Figure 3.9).

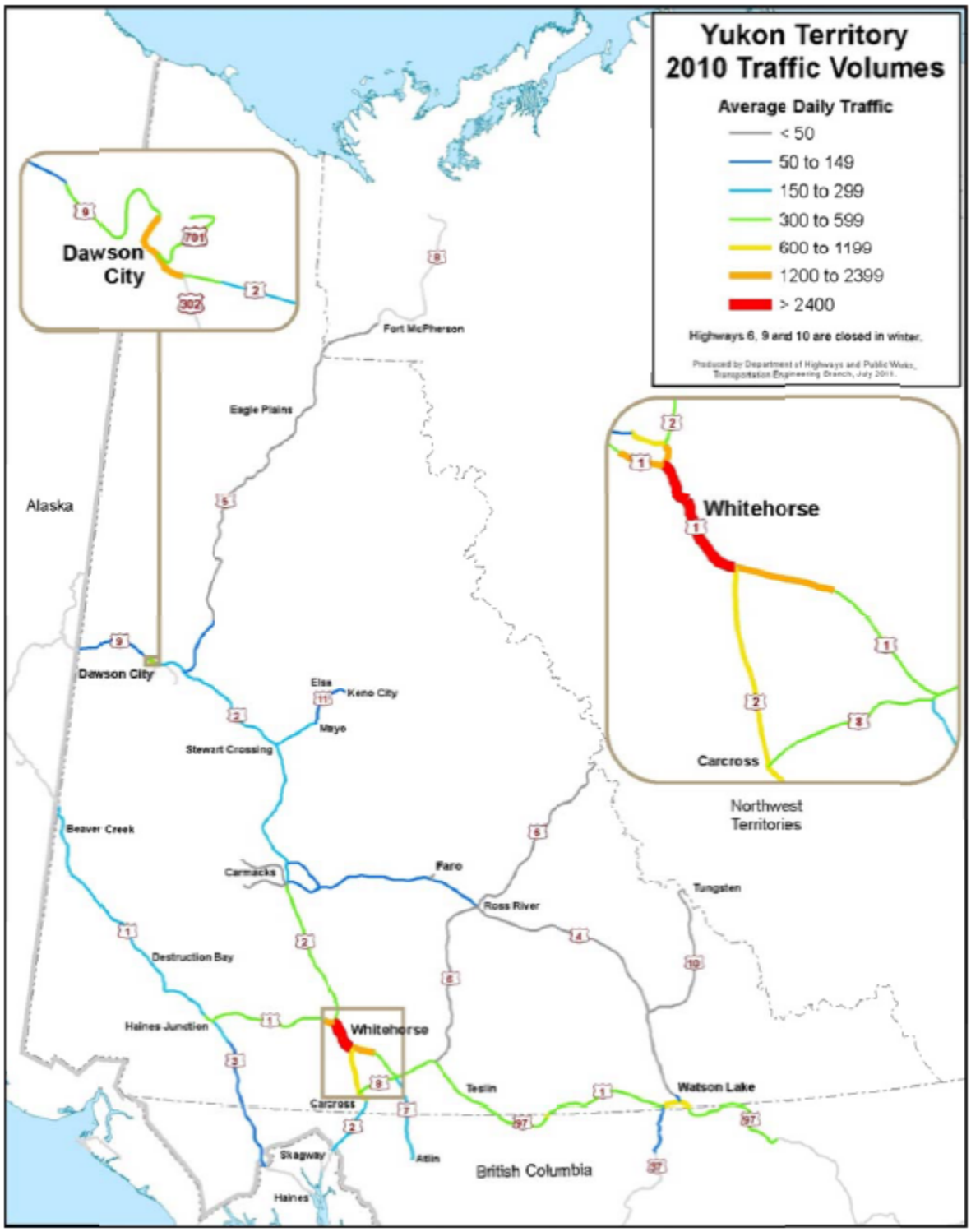
Pelly Crossing

The Pelly Crossing traffic count data is recorded at km 466.7 along the Klondike Highway (Yukon Highways and Public Works 2011). The ADT has varied from an average of 506 vehicles in 2005 to 196 vehicles in 2008 (Table 3.29). In general, the months of July and August appear to be the busiest for traffic in Pelly Crossing.

Table 3.29 Summary of Pelly Crossing Traffic Count Data from 2002 to 2011

Year	May	June	July	August	September	ASDT	ADT
2002	191(30)	355	401	992(26)	*	451(121)	451(121)
2003	*	427(4)	439	480	480(18)	462(84)	462(84)
2004	*	*	*	*	*	*	*
2005	*	473	605	615	314(29)	*	506(120)
2006	*	*	*	*	*	*	*
2007	*	156(24)	340	132	42	*	213(113)
2008	132(30)	203	237	210	210(4)	*	196(126)
2009	No data						
2010	No data						
2011	No data						

Source: Yukon Highways and Public Works 2011, p. 52.



Source: Yukon Highways and Public Works 2011, p. 8.

Figure 3.9 Yukon Territory 2010 Traffic Volumes

3.11 Cultural Well-Being

Cultural well-being is an important component of the well-being of the SFN community. Supporting, cultural activities, events, and initiatives that promote the sharing and teaching of cultural knowledge and the Northern Tutchone language is a priority for the SFN community. Though the baseline condition of SFN cultural well-being cannot be expressed through quantitative measures, the following qualitative description of ongoing community activities and initiatives presents how the SFN is working to support and enhance the cultural well-being of its citizens.

The Selkirk Spirit Dancers are an example of a community initiative that develops the cultural well-being of members through its teaching of traditional dancing, drumming, and clothing. The Selkirk Spirit Dancers are a SFN community dance group that included approximately 30 dancers and 4 drummers in the summer of 2012 (INT09). Since 2006, the group has been practicing, performing, and competing. Dance performances by the group also work to support cultural revitalization amongst the community.

Cultural well-being may also be developed through culturally relevant employment opportunities. The Big Jonathon House offers such opportunities each year with its seasonal hiring of two SFN citizens to provided cultural interpreter services to the center's visitors (INT09). Furthermore, the Big Jonathon House also seasonally employs local SFN artisans for its "Live Arts Program". As part of this program, artisans are employed to work on their cultural arts at the centre, so that visitors can learn from them (INT09). Culturally well-being is also supported by Pelly Crossing employers who work to enable their employee's to pursue traditional use activities throughout the year. The SFN administration supports its employees interests to pursue traditional use activities, by providing up to two weeks of time off each year for employees to take their "traditional pursuit" leave (INT09).

Sharing and teaching cultural knowledge is an important component of SFN cultural well-being. Elders play an integral role in the transmission of cultural knowledge and to supporting cultural well-being. Several interviewees shared that SFN Elders are deeply respected as teachers of traditional knowledge and cultural practices, and that they have invaluable traditional knowledge and experience to share (INT17, INT10, INT18).

The Northern Tutchone Language is the traditional language of SFN and shares an intimate relationship with the nation's territory. Numerous citizens shared that the language comes from the land and that the two are intrinsically linked (INT18, INT17, INT10, INT26). The language may be used to reflect this relationship and promote its use through the use of traditional place names (INT2TK).

Supporting community programs and initiatives that promote social cohesion, traditional values and healthy lifestyle principles was communicated to be an important contributing factor to community well-being. An example of such an initiative is the Pelly Crossing community garden. Initiated in 2010, the community garden grows flowers and vegetables each year. All vegetables are given away for the community to eat when grown and the flowers are used throughout the community and at people's homes (INT26). The Pelly Crossing community garden is financially supported by SFN funding and employs SFN citizens, and includes those community members who are interested in being involved (INT26)

3.12 Traditional and Current Use

3.12.1 SFN Land Use

Connections to the land and water were examined within the LSA, as the SFN culture and community are intrinsically linked to these resources within its traditional territory. The connection that SFN has with the land and water is complex and involves many different components, some of which were shared with the Study research team.

Traditional use activities are actively pursued by SFN citizens throughout the year across their traditional territory and are a culturally significant way in which they maintain their connection with the land and water. Several citizens shared about the importance of fishing (INT29, INT18, INT10, INT71, INT13, INT26), hunting (INT29, INT18, INT10, INT17, INT13, INT26), berry picking (INT17, INT26), medicinal plant gathering (INT10, INT17, INT26), and trapping (INT18, INT26). One SFN citizen shared that the fish and animals are an important part of SFN culture and contribute a large part of many family's diets; they wondered if future generations would be able to continue harvesting fish and animals from the land, and if they would be of a good enough quality to eat (INT10, INT17, INT13TK). Connections to land and water are further described in detail in the confidential Minto *SFN Traditional Knowledge Study* report (KCB 2011).

Revitalizing SFN's traditional Northern Tutchone language throughout the community was also identified as a key component of the nation's intrinsic connection to the land and water. Though few citizens participating in the Study were fluent in Northern Tutchone themselves, promoting the use of and improving the fluency of Northern Tutchone within the SFN was shared as a communal objective (INT26, INT18, and INT27).

Sustaining a healthy environment throughout the SFN territory was an important value identified by several SFN citizens. Citizens expressed several concerns and observations that they felt may be directly or indirectly related to the mine and other developments across the territory. These included:

- Changes to the water: SFN citizens shared that they used to drink it, but don't do so anymore (INT2TK). Furthermore, an Elder shared that they never dreamed that they'd have to buy water and haul it across the land while they went out to conduct traditional activities, but now has to as he doesn't trust the water and feels that it is not clean (INT18).
    - Other SFN citizens shared the observation of an unknown "glaze-like" substance on the surface of the Yukon and Pelly Rivers in the summer of 2012 (INT17; INT).
- Changes on the land: Changes on the land are being observed by SFN citizens, including:
    - non-native plant species (INT17; INT10); and
    - changes to vegetation (INT15TK).
- Increased hunting and fishing pressures from non-SFN citizens across the SFN territory, as all the pressures on fish may reduce abundance and lead to a day when "catch and release" policies are implemented (INT18).
- Changes to where traditional use activities are conducted.

More specific to the mine, SFN citizens shared opinions and concerns related to:

- erosion of the permafrost (INT23);
- current Minto barge location (INT23);
- dust from the mine being "washed" off site with snowmelt and spring runoff (INT23, INT29);
- wildlife in the area around the mine, as this area was traditionally known as a productive moose habitat (INT23, INT10); and
- effect of mine water discharges on the Yukon River and fish even though the water is tested. They are concerned about the potential effects of these discharges and the ability of fish to deal with this water (INT23, INT15, INT26).

3.12.2 Other Resource and Land Use

This section provides an overview of other resource and land use in the LSA.

3.12.2.1 Land Tenure

The majority of the land tenure in the immediate area surrounding the mine site is held under title by the SFN. This includes parcels of land located on both the east and west side of the Yukon River, categorized as both "Category A" and "Category B" land (Figure 3.10). The land tenure selections made by SFN reflect the significance of the Minto and Minto Landing areas for traditional and historic use. Several fee simple titled properties are located on the east side of the Yukon River in the Minto Landing area.

3.12.2.2 Registered Trapping Concessions

Trapping concessions are located throughout the LSA, including the immediate project area. Trapline concessions #145 and #146 (Figure 1.3), located on the west side of the Yukon River, directly overlap with the Minto Mine site footprint and/or accessory activities (e.g., roads, barge landing, etc.). Access to the trapline concessions was maintained throughout Phase IV operations, and confidential compensation agreements have been negotiated between certain trapline concession holders and Minto.

3.12.2.3 Outfitter Concessions and Game Management Areas

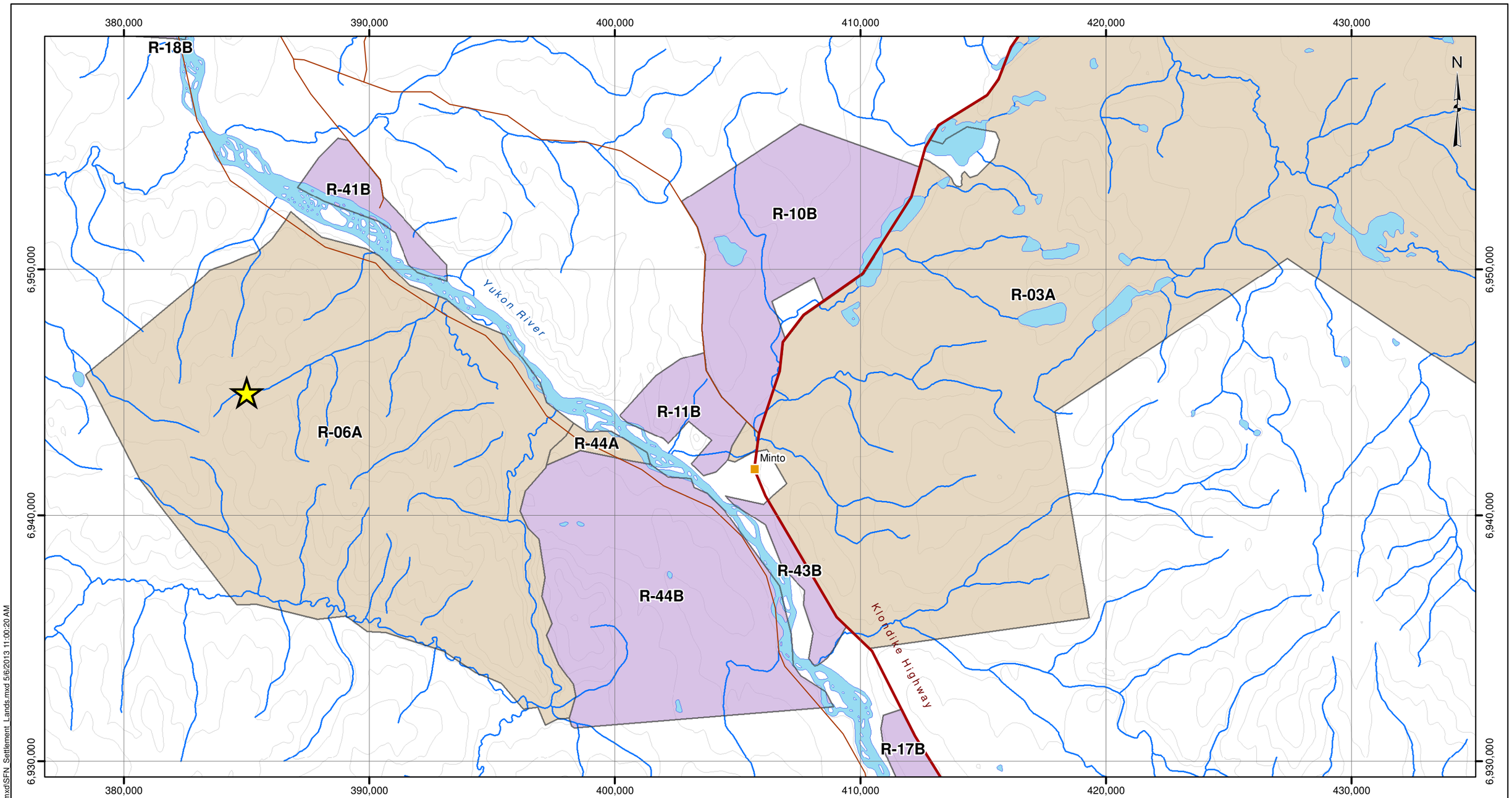
Two guide outfitter concessions are located within the LSA: Registered Outfitter Concession #13 held by Tim Mervyn (Mervyn Outfitting) and Registered Outfitter Concession #14 held by Dean Sandulak of Trophy Stone Outfitting Ltd. (TSO) (Figure 3.10). Both guide outfitters were contacted by study researchers; however a response was only received from TSO. The mine site is located within Game Management Zone 5, subzone 5-22.

TSO operates on guide outfitter concession #14, and has been owned and operated by the Sandulak family since 2007. Some of the game that this outfitter offers hunts for include: stone sheep, Yukon moose, mountain caribou, grizzly bear, black bear, wolf, and wolverine (Trophy Stone Outfitting Ltd.

2010). The two types of game that TSO hunts in the immediate Minto area are bear and moose. More specifically, bear are hunted along the north side of the Yukon River in the Minto area in the spring (i.e., mid-May to early June) and in the late fall (i.e., October), and moose are hunted along the Yukon River in the late fall.

The Minto Mine barge landing is occasionally used by TSO to put in and take out their boats from the Yukon River; however, this is done before the barge begins running in the morning to avoid any conflict with traffic. Approximately 4 km downstream from the Minto Landing, TSO has a trappers' cabin that it uses on occasion during hunts. This cabin is one of approximately 20 camps that TSO uses throughout its concession area.

TSO has not observed any influences from the operation of the Minto Mine and/or its accessory activities on its business to date. An increase in traffic was the only concern expressed by the TSO with regards to the proposed project.



LEGEND

- Minto Mine
- Local Study Area Towns
- Regional Study Area Towns
- Primary Highway
- Road
- Contours (50 m)
- River
- Waterbody

SFN Settlement Lands

- Category A
- Category B

Notes:
1. UTM Zone 8N, NAD83
2. Base data from Yukon Government (1:50:000)
3. Settlement Categories from Yukon Government (1:1,000,000)

TO BE READ WITH KLOHN CRIPPEN BERGER REPORT DATED _____

0 10 km

CLIENT: CAPSTONE MINING CORP.

Klohn Crippen Berger

PROJECT: MINTO SOCIO-ECONOMIC STUDY

TITLE: MINTO SFN SETTLEMENT LANDS

PROJECT No. M09638A02

FIG No. 3.10

msmulders
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3.12.2.4 Forestry

Forestry activities permitted by the Yukon Government Department of Energy, Mines and Resources, are limited to Commissioners Land (formerly known as "Crown Land"). Forestry activities occurring on Settlement Lands are administered by the respective First Nation who has ownership of that land.

There are currently no commercially permitted forestry activities in the LSA, as commercial permits in Yukon refer to those activities resulting in a harvest greater than $50m^3$ that is sold to clients (Yukon Energy, Mines and Resources 2007). According to the Carmacks/Pelly Crossing/Ross River/Faro Regional Forester, there were approximately three small operators within the LSA who were permitted to cut wood as of May 2013 (G. Cowman, May 8, 2013, personal communication). These three small operators were estimated to each have an annual cut of approximately 40 to 50 cords of wood, which were sold to residents and/or land users (i.e., visitors to Yukon parks) within the LSA and RSA (G. Cowman, May 8, 2013, personal communication).

3.12.2.5 Recreation and Other Land Uses

The Yukon River is a well-used waterway frequented by recreational, commercial, and other land users. Recreational activities supported by the Yukon River and immediate Minto Landing area include canoeing/boating, fishing, hunting, and hiking. Many recreational users (including tourists) pass by this location as part of their canoeing/boating excursion or use the east side of the Yukon River as a starting point to access other locations downriver, including the historic Fort Selkirk.

3.12.2.6 Cultural Land Use Activities

Cultural land use activities are described in Section 3.12.

3.13 Intergenerational Equity

The condition of sustainability, of which intergenerational equity is a component, captures how Minto-SFN initiatives and agreements may contribute to current and future positive socio-economic effects for the SFN and its citizens. As key Minto-SFN agreements are currently confidential and unavailable for consideration in this Study, the existing condition of this value was characterized by qualitative community-based information about intergenerational equity and the Minto Mine-SFN relationship. Discussions are ongoing in the community as how this could be achieved and input received regarding the Project is discussed in Section 4.7.1.

3.14 Minto -SFN Relationship

The Minto Mine and the SFN have been developing their relationship since before the mine's operations began. Many SFN citizens shared recommendations on how they felt the Minto Mine-SFN relationship might continue to evolve and strengthen in relation to Phase IV as well as future activities. These were:

- Minto financially supporting and participating in SFN cultural events, programs, and activities based in the community as well as hosting such activities at the mine site (INT13, INT29).

- Improving communications between Minto and the SFN by:
  - Minto communicating directly with the community through such methods as community meetings and newsletters (INT29, INT2TK, INT13TK, INT15ATK).
  - Minto communicating on a regular basis and including such important information as environmental monitoring results (INT13TK).
  - Identifying more opportunities for Minto to engage with the SFN community. Citizens shared that it's important to start raising the mine's visibility and awareness to youth and children so that they become familiar with the mine and more comfortable with the idea of potentially working in the industry when older (INT16, INT13).
  - Improving attendance at community meetings by increasing the amount of advertising of meetings, by providing incentives for members to attend (like door prizes), and by continuing to have meetings that are open to the entire community (INT26, INT25).

SFN citizens shared that it was a positive development to see Minto consult SFN Elders directly about how the mine could contribute to the development of the SFN community at the 2012 Annual General Assembly, and that such communications should continue (INT25).

4 SOCIO-ECONOMIC EFFECTS ASSESSMENT

This section presents the findings of the effects assessment completed for each of the 14 identified VSECs for the operations, decommissioning, and closure phases. The effects assessment follows the methodology identified in Section 2. In this Section, the VSECs are grouped according to the socio-economic condition to which they are related.

It should be noted that a construction phase was not considered in the assessment, as there is no distinct construction phase associated with the Project. Furthermore, although it is recognized that a temporary closure during project operations would result in socio-economic effects, the nature and significance of these effects cannot be determined, as they will depend on the nature of the closure (i.e., length of closure, etc.) and the socio-economic setting at that time. As such, temporary closure is not specifically discussed in the assessment of each VSEC.

4.1 Material Well-Being

In this Study, the socio-economic condition of material well-being includes the VSEC's of business opportunities, employment opportunities, employment income, royalties and donations, and traditional economy.

Economic opportunities related to material well-being (i.e., business, employment, and income) are associated with all phases of the Project; however, the nature of these opportunities will vary by phase. Opportunities generated by the Project would accrue to businesses and individuals located in the RSA, LSA, and outside of Yukon. These opportunities would provide income during the operations, decommissioning, and closure phases of the Project and provide work experience that could be transferred to other projects in the future. However, after an initial increase in opportunities relative to Phase IV, the available opportunities will decrease as the Project advances towards, and proceeds through, decommissioning and closure.

In addition, the SFN will also benefit from ongoing royalty payments during mine operations and the LSA and RSA will benefit from ad hoc donations from Minto throughout the mine life.

Project activities will result in increased economic activity in the RSA and LSA and elsewhere. The YG and SFN have expressed a desire for local and regional economic development, which will be supported by project-related business and employment opportunities. Economic development initiatives for the SFN could also be supported by the royalty payments should the SFN choose to expend the monies to support such initiatives.

4.1.1 Business Opportunities

Business opportunities will be created in the RSA, LSA, and elsewhere as a result of direct and indirect project related demands for goods and services. As the Project is essentially a continuation of Phase IV with a greater emphasis on underground mining than surface mining, it is anticipated that many of the contractors currently serving the mine would continue to do so. There will also be opportunities for new goods and services to be provided to meet the needs of changing activities at site over the course of the mine life. This will provide the opportunity for existing suppliers to diversify the goods and services that they supply and for new suppliers to secure business with the mine. It is also

possible that, as the Yukon mining industry grows, suppliers providing goods and services from outside Yukon may move to establish themselves within Yukon and serve the mine.

4.1.1.1 Operations

Effects

Goods and services required by the mine are provided through contracts established with suppliers in the RSA, LSA and elsewhere. As was discussed in Section 3.1, Minto currently works with approximately 475 suppliers and has a number of initiatives in place to enhance the participation of RSA and LSA based businesses at the mine. In 2012, approximately $81 million of Minto's $277.3 million in total expenditures were in Yukon.

The demand for goods and services is anticipated to continue at a similar level to that experienced during Phase IV until 2018, when demands will change with respect to changing activities at the mine. Although overall opportunities will decrease as the Project progresses through operations, Minto anticipates that a similar or larger portion of its expenditures will continue to be spent on Yukon based goods and services. It will also continue to secure competitive prices and rates for these goods and services.

The SFN have indicated that they would like to increase their participation in business opportunities at the mine. The project will provide an opportunity for the Selkirk Development Corporation joint ventures serving the mine as well as other existing and new LSA businesses to increase their involvement in the Project given that approximately 70% of goods and services are currently sourced from outside Yukon. However, there will be some limitation on the percentage of expenditures that could ultimately accrue to the LSA given the specialized nature of some of the goods and services required.

The cessation of surface mining at the end of 2017 will mark the beginning of a gradual decrease in site activities over the last five years of project operations. As a result, business opportunities will decrease and change; however, as suppliers will be aware of the Project schedule from the beginning of the Project (i.e., 2014) they will be able to adjust and incorporate this information with their business plans.

The ongoing experience of RSA and LSA contractors working with Minto will position them well for work with other mining and mineral exploration related projects, as well as other major projects in Yukon and elsewhere. In addition, as noted above, the Project will give businesses currently serving the mine additional time to seek out opportunities to replace those at the mine when the opportunities at the mine are no longer available or to adjust the goods and services they provide to enable them to better secure opportunities during decommissioning and closure.

Mitigation

Minto will initiate or continue the following enhancement measures during operations:

- advising goods and services suppliers of the Project schedule to enable them to consider this in their planning;
- working with SFN to identify the best means through which to advise SFN businesses or those interested in providing goods and services to the mine of the potential opportunities; and
- enhancing activities currently underway as part of Phase IV including:
  - using businesses within the LSA and RSA whenever possible to provide goods and services to the mine; and
  - adhering to the terms of the Minto-SFN Cooperation Agreement. As part of this agreement, Minto provides SFN with the initial option to provide services via the SFN Selkirk Development Corporation (SDC).

Conclusion

Based on the assessment and mitigation described above, Project operations are not anticipated to result in a significant adverse effect on business opportunities in the RSA or LSA. In fact, Project effects during operations in both the RSA and LSA are anticipated to be positive, medium magnitude, long-term (i.e., continuing through more than one phase), and continuous.

As discussed earlier, it is anticipated that there will be opportunities for the existing joint venture companies, other LSA and SFN businesses and RSA businesses to provide goods and services to the mine throughout project operations with the magnitude of the effect being medium given the specific nature and scope of the opportunities available.

As the Project effects on business opportunities were not determined to be adverse, residual effects were not assessed.

4.1.1.2 Decommissioning and Closure

Effects

In Minto's *Decommissioning and Reclamation Plan Revision 3.2* (Minto 2011b), an approximate closure cost ranging between approximately $12.7 million and $12.9 million was provided; however, specific details regarding the proportion of this estimated cost attributed to business opportunities, or the type of opportunities expected, were not provided.

It is anticipated that new opportunities related to reclamation, monitoring, and site maintenance will arise for LSA and RSA businesses during decommissioning and closure. This will provide the opportunity for businesses currently not involved in the Project to become involved and, for certain businesses, will provide the opportunity for long-term involvement through closure. It will also provide an opportunity for goods and service providers to gain experience that will help them secure additional business beyond the life of the Project.

As noted in the operations discussion (Section 4.1.1.1), the SFN have indicated that they would like to increase their participation in business opportunities at the mine and decommissioning and closure

could provide long-term business opportunities for certain Selkirk Development Corporation joint ventures as well as other existing and/or new LSA businesses.

Mitigation

Enhancement during decommissioning and closure would be the same as that described for operations.

Conclusion

Based on the assessment and mitigation described above, Project decommissioning and closure are not anticipated to result in a significant adverse effect on business opportunities in the RSA or LSA. As with operations, effects during decommissioning and closure in both the RSA and LSA are anticipated to be positive, low magnitude, long-term (i.e., extending beyond the end of the Project life), and continuous.

As with operations, there will be opportunities for the existing joint venture companies, other LSA and SFN businesses and RSA businesses to provide goods and services to the mine throughout decommissioning and closure; however, the nature of goods and services will change and, as such, certain suppliers will no longer have opportunities at the mine while opportunities may arise for new suppliers. As the opportunities during decommissioning and closure will be more limited than those during operations, the magnitude is characterized as low.

As the Project effects on business opportunities were not determined to be adverse, residual effects were not assessed.

4.1.2 Employment Opportunities

The Project will create direct, indirect, and induced employment opportunities during operations, decommissioning, and closure. The nature of employment will vary based on activities occurring at the site. The SFN, as well as RSA communities, have expressed a desire for enhanced employment opportunities in the LSA and RSA. In 2012, approximately 35% of Minto workers reside in the LSA or RSA, with the remainder being based outside Yukon. Given the potential for increasing demand for mining related employment opportunities in Yukon in upcoming years, it is anticipated the more residents of the LSA and RSA will be interested in gaining mining related experience.

Opportunities with mining contractors working at site are discussed in this section from an employment perspective but were also discussed above in terms of business opportunities.

4.1.2.1 Operations

Effects

During project operations, employment opportunities are expected to range between 125 positions in year 2022 and 450 positions in year 2016 and 2017. Compared to the peak Phase IV employment levels (400 positions), this amounts to a maximum increase at peak project operations of approximately 50 positions. Employment will remain at this level until 2018 when it will start decreasing as surface mining and then underground mining are completed (Table 4.1). At the time

this report was prepared, information regarding the specific nature of the anticipated positions (e.g., length of employment, types of jobs, etc.) was not available.

Based on the current breakdown of staff location (i.e., 35% Yukon based), 18 of the additional 50 positions would be filled by Yukon based (i.e., RSA and/or LSA residents) Minto or contractor employees at peak operations. Additional indirect and induced employment would also be created.

Table 4.1 Phase V/VI Operations Employment Estimates

Position Type(s)	Time (Year)								
	2014 (Q2)	2015	2016	2017	2018	2019	2020	2021	2022
Milling									
Surface Mining									
Underground Mining									
Progressive Reclamation									
Approximate Total Site Employment	400	440	450	450	350	325	150	150	125

Source: Data received from Minto.

Employment opportunities available through project operations will be related to milling, surface mining, underground mining, progressive reclamation, and mine management (Table 4.1). The mine's two week on and off work schedule will continue throughout the Project, with the possibility that some personnel could work four weeks on and three off, depending upon the job (personal communication, C. Gray, Minto, December 7, 2012).

Although there are no specific targets set for hiring SFN citizens, Minto has stated that it is committed to increasing the overall number of SFN employees and to providing training to enable the career advancement. The SFN have identified a number of actual and perceived barriers to SFN employment at the mine including lack of opportunities for women, lack of cultural activities, shift work, lack of traditional food, lack of support for SFN members, and shift length. As described in the mitigation section below, Minto is, and will continue to, work with the SFN to address these items with a view to both increasing the number of SFN citizens working at the mine and extending the period of time that those who are hired stay at the mine.

Ongoing experience gained by RSA and LSA residents working on the Project will position them well for employment with other mining and mineral exploration projects, or other opportunities within the LSA, RSA, or elsewhere.

Mitigation

Minto will undertake the following activities with a view to enhancing potential employment opportunities for LSA and RSA residents:

- advising employees of the duration of their specific job as well as of any potential opportunities following the end of their job;
- continuing existing measures including:
  - adhering to the terms of the Minto-SFN Cooperation Agreement;

  - preferential hiring of LSA employees and suppliers within the LSA;
  - providing competitive wage and benefits to encourage long-term employment and reduce staff turnover;
  - continuing the SFN-Minto Liaison position; and
  - continuing the training programs identified in Section 3.9.
- continuing to work with the SFN to develop initiatives to increase SFN employment at the mine. Examples of plans to support SFN employment are listed in Table 4.2; and
- working with the SFN to identify means through which to address identified potential barriers to SFN employment at the mine.

Table 4.2 Operation Phase Employment Initiatives for SFN Citizens

Employment Areas	Description
Underground Mining	Minto will be putting on a training program in conjunction with SFN and Dumas, the underground contractor at the mine. This will be provided to ten community members who will be qualified to work at the mine once they successfully complete the program.
Environment Department	Approximately four to five SFN citizens will be employed to assist with reclamation projects annually.
Mill	As the Centre for Northern Innovation in Mining offers the "introduction to mining course", and the Yukon College in Pelly Crossing starts to develop its Lifeskills Program, there will be more SFN citizens who are able to come into the mill, with the intent to progress to supervisory positions over time.
Maintenance	Minto anticipates bringing in three apprentice positions in the near future in the maintenance department with the expectation that the program could grow as the mine develops.
Students	Minto will continue to offer a summer student program which employs five SFN students for the summer months.

Source: Data provided by Minto.

Conclusion

Based on the assessment and mitigation described above, Project operations are not anticipated to result in a significant adverse effect on employment opportunities in the RSA or LSA. Project effects during operations in both the RSA and LSA are anticipated to be positive, medium magnitude, long-term (i.e., continuing through more than one phase), and continuous.

As discussed earlier, it is anticipated that there will be increased opportunities for LSA and RSA residents, including SFN citizens at the mine throughout operations. The magnitude is identified as medium as it is anticipated that the portion of LSA and RSA employees at the mine will increase given Minto's focus on training LSA residents as well as SFN citizens residing elsewhere to take advantage of opportunities at the mine.

As the effects on employment were not determined to be adverse, residual effects were not assessed.

4.1.2.2 Decommissioning and Closure

Effects

Employment opportunities will continue throughout decommissioning and closure. The number of employment opportunities is expected to range between 25 positions and 63 positions, including part-time and seasonal positions (Table 4.3). The types of positions required will vary throughout decommissioning and closure depending on the specific activities being undertaken in any given year.

Table 4.3 Phase V/VI Decommissioning and Closure Phase Employment Estimates

Position(s)	Time (Year)			
	2023	2024	2025	2026-2042
Project Manager	1	1	1	
Construction Supervisor/Engineer	1	1	1	
Environmental Monitoring	1	1	1	2
Water Treatment Operators	4	4	4	4
Equipment Operators	12	4	2	
Equipment Mechanics/Welders/ Fabricators/Electricians	5	5	1	
General Labourers	5	3	2	2
Catering Staff	2	1		4
Total Seasonal Personnel	31	20	12	12
Part-time, Off-season Security/Caretaker	1	1	1	1
Approximate Total Site Employment	63	41	25	25

Source: Data provided by Minto.

It is anticipated that a greater proportion of workers will come from the LSA and RSA during the decommissioning and closure phases due to the skills and type of opportunities required during this time. This will be an opportunity for LSA and RSA residents to secure long-term work, gain experience, and in turn, help them to secure alternative employment at the end of their appointment with the Project.

Mitigation

Enhancement measures will be generally consistent with those described for the operations phase; however, they will be tailored to the specific needs of decommissioning and closure.

Conclusion

Based on the assessment and mitigation described above, decommissioning and closure are not anticipated to result in a significant adverse effect on employment opportunities in the RSA or LSA. As with operations, effects during decommissioning and closure in both the RSA and LSA are anticipated to be positive, low magnitude, long-term (i.e., extending beyond the end of the Project life), and continuous.

As with operations, there will be employment opportunities for LSA and RSA residents, including SFN citizens throughout decommissioning and closure; however, the nature of the opportunities will change and it is anticipated that a higher proportion of the available opportunities will be secured by

LSA and RSA residents. However, as the opportunities during decommissioning and closure will be more limited than those during operations, the magnitude is characterized as low.

As the effects on employment were not determined to be negative, residual effects were not assessed.

4.1.3 Employment Income

Employment income will be generated by direct, indirect and induced project-related employment with changes in income being reflective of changes in employment levels. As with business and employment opportunities, it is not possible to accurately predict what portion of the employment income will accrue to RSA and LSA residents. However, estimates can be made based on the permanent residence locale of existing employees (i.e., contractor and Minto).

4.1.3.1 Operations

Effects

Operations will result in ongoing employment income to those working at or serving the mine. The Minto Phase VI Pre-feasibility Study Technical Report included an estimate of approximately $150 million in total direct Minto site labour income between 2014 and 2022 (Minto 2012b). Contractors will provide additional sources of income for LSA and RSA residents and others.

This VSEC will be positively affected by the Project, as it will provide well-paying employment positions that contribute to improved self-esteem and decrease financial stress on families. As noted above, the Project will result in the generation of approximately $150 million of Minto direct site employment income along with an undetermined amount of contractor employment income. Assuming that the Phase IV distribution of workers is maintained in Phase V/VI, approximately 35% of the direct income could accrue to the RSA and LSA; however, the actual percentage will depend on the nature of the employment secured by RSA and LSA residents and the associated salary.

Based on the assessment, effects in the RSA and LSA during operations are anticipated to be positive, medium magnitude, long-term (i.e., extending through more than one phase), continuous, reversible, and occurring in a resilient area.

Mitigation

Employment income accruing to the RSA and LSA will be enhanced through the mitigation measures identified in Section 4.1.1 and Section 4.1.2.

Conclusion

Based on the assessment and mitigation described above, Project operations are not anticipated to result in a significant adverse effect on employment income in the RSA or LSA. As with employment, Project effects during operations in both the RSA and LSA are anticipated to be positive, medium magnitude, long-term (i.e., continuing through more than one phase), and continuous.

As discussed earlier, it is anticipated that there will be increased opportunities for LSA and RSA residents, including SFN citizens at the mine throughout operations and this will result in ongoing or

new income. The magnitude is identified as medium as it is anticipated that the portion of LSA and RSA residents securing income from employment at the mine will increase given Minto's focus on training LSA residents as well as SFN citizens residing elsewhere to take advantage of opportunities at the mine.

As the Project effects on employment income were not determined to be adverse, residual effects were not assessed.

4.1.3.2 Decommissioning and Closure

Effects

Employment income will be generated during decommissioning and closure; however, details regarding the value of this income were not available for consideration in this assessment.

As with employment, it is possible that a higher percentage of the income will accrue to LSA and RSA residents during decommissioning and closure given the nature of employment during these phases; however jobs associated with decommissioning and closure are generally lower paying than the skilled mining jobs.

Mitigation

Enhancement measures during decommissioning and closure will be consistent with those described in Section 4.1.3.1but will be tailored to the phase at hand.

Conclusion

Based on the assessment and mitigation described above, decommissioning and closure are not anticipated to result in a significant adverse effect on employment income in the RSA or LSA. Again, as with employment, effects during decommissioning and closure in both the RSA and LSA are anticipated to be positive, low magnitude, long-term (i.e., extending beyond the end of the Project life), and continuous.

As was the case during operations, there will be employment opportunities for LSA and RSA residents, including SFN citizens throughout decommissioning and closure and these opportunities will generate income for those securing positions at the mine. However, the nature of the opportunities will change and, as noted earlier, income associated with the positions is anticipated to be lower than that associated with operations positions overall. Therefore, the magnitude is characterized as low.

As the effects on employment income were not determined to be adverse, residual effects were not assessed.

4.1.4 Royalties and Donations

Minto provides royalties to the SFN and ad hoc donations to support a variety of initiatives in the RSA and LSA. As the Project is on Category A Settlement Land, monies that would otherwise be paid to the YG in the form of taxes are paid, instead, to the SFN in the form of royalties. As such, the contribution of the mine to the YG tax base is reduced and the contribution to the SFN increased.

4.1.4.1 Operations

Effects

Payment of royalties to the SFN will continue throughout Project operations, based on the terms of the Minto-SFN Cooperation Agreement. As the Minto-SFN royalty agreement is confidential, specific details of this agreement, including the expected value of the Project royalties were not available for consideration in this assessment. However, as noted in Section 3.4, Minto has paid $12.6 million in royalties to the SFN since 2008 (Yukon Government 2012) and payments are expected to continue at similar levels provided that there are no major changes in the market for products from the mine.

Upon receiving the royalty payments, the SFN determine how the monies received will be managed and whether any of the monies will be distributed directly to SFN citizens. The ultimate effect of the royalty payments on the community is determined by the SFN.

Minto donations made to the SFN and other Yukon communities are considered on a case-by-case basis, using the Minto donations guideline. As donations are considered on an individual basis, no data is available to estimate the value of Minto donations that may be made to the SFN and other Yukon communities during the Project operations.

Mitigation

To help the SFN prepare for the cessation of royalty payments, Minto will engage in on-going communications with the SFN to ensure that they are aware of the Project schedule and the timing of cessation of royalty payments and can plan accordingly. Minto will also advise the SFN regarding plans for donations post operations.

Conclusion

Based on the assessment and mitigation described above, Project operations are not anticipated to result in a significant adverse effect on royalties and donations income in the RSA or LSA. Effects during operations in the RSA are anticipated to be positive, low magnitude, long-term (i.e., associated with donations only), and of low frequency. Effects in the LSA are anticipated to be positive, medium magnitude (as the effect is noticeable at the community level), short-term (i.e., for royalties associated with operations only) and long-term (for donations), and continuous for royalties and of low frequency for donations.

As the effects on royalties and donations were not determined to be negative, residual effects were not assessed.

4.1.4.2 Decommissioning and Closure

Effects

Based on the current Minto-SFN royalty arrangement, royalty payments will not be paid during decommissioning and closure. It is also anticipated that donations will cease following operations; however it is possible that donations may be considered on a case-by-case basis during decommissioning and closure.

Mitigation

None required.

Conclusion

Based on the assessment, decommissioning and closure are not anticipated to result in a significant adverse effect on donations in the RSA or LSA. Effects on donations during decommissioning and closure in the RSA and LSA will be neutral or positive, low magnitude, short-term, and of low frequency.

As the effects on donations were not determined to be negative, residual effects were not assessed.

4.1.5 Traditional Economy

As described in the baseline, many SFN families depend, at least in part, on traditional use activities such as hunting, fishing, trapping, and gathering wild foods for food and income. The ability to participate in traditional activities and the contribution of these activities to the families that participate in them continues to be important value to SFN. It is possible that the Project could affect the traditional economy if there were effects to natural resources as a result of the Project or if people's ability to participate in the traditional economy was affected.

4.1.5.1 Operations

Effects

Effects currently being experienced as a result of Phase IV will be extended as a result of the Project but increased effects over those currently experienced are not anticipated as:

- project activities, including clearing, will take place within the existing lands leased by Minto;
- changes to the nature or volume of traffic to and from the site are not anticipated;
- the frequency or materials used for blasting are not anticipated to change; and
- environmental studies conducted for the Project indicate few, if any, project effects on air, noise, water quality, and resources in the LSA.

Furthermore, although the effects of the Project on the land on which it is situated will continue through operations, the area affected will decrease as progressive reclamation is undertaken.

Some SFN citizens perceive that mining operations have had detrimental effects: driving animals further from their usual habitats, interfering with fishing, contributing dust to the surrounding environment, affecting access to specific timber harvest areas, influencing permafrost, and degrading water quality. However, a quantitative value representing the monetary worth of the current SFN traditional economy is not available and was not considered in this assessment. SFN citizens whose traplines directly overlap with the mine footprint are compensated through confidential trapline agreements with Minto. Due to the confidential nature of these agreements, they were not considered in this assessment.

Mitigation

Mitigation is as described in the environmental impact assessment for water, air, wildlife and vegetation. Further, progressive reclamation activities are scheduled to occur throughout operations and will involve consultation with the SFN to ensure that closure measures are appropriate and supported by those most affected.

Conclusion

Based on the assessment and mitigation described above, Project operations are not anticipated to result in a significant adverse effect on the traditional economy in the LSA. Effects in the LSA during operations are anticipated to be neutral, low magnitude, long-term, and continuous as the effects will be a continuation of Phase IV effects.

As the effects on the traditional economy were not determined to be negative, residual effects were not addressed.

4.1.5.2 Decommissioning and Closure

Effects

The overall goals of decommissioning and closure are:

- to leave the area as a self-sustaining ecosystem;
- to ensure that the reclaimed lands are compatible with the desired land use (including traditional use); and
- to work to return site vegetation to a state as near as possible to that in existence prior to mining activities.

Minto is committed to approaching decommissioning and closure with the objective of protecting people from safety risks when they are pursuing traditional activities, including hunting, fishing, trapping, camping, and collecting plants for food, medicinal or cultural purposes.

Mitigation

Mitigation will be the same as that described for operations above but with a focus on decommissioning and closure.

Conclusion

Based on the assessment and mitigation described above, decommissioning and closure are not anticipated to result in a significant adverse effect on the traditional economy in the LSA. Effects in the LSA are anticipated to be neutral, low magnitude, long-term, and continuous as the effects will be a continuation of Phase IV effects but likely at a lower level as progressive reclamation will have been ongoing during operations.

As the effects on the traditional economy were not determined to be negative, residual effects were not assessed.

4.2 Population

The socio-economic condition of the population includes two VSECs in this Study: community stability and housing. Both of which can be affected by population change and in the case of housing, can have an effect on population change.

The economic opportunities created by the Project could lead to people moving into the RSA and LSA. Individuals coming to the RSA and LSA could include direct and indirect workers and their families as well as job seekers. Population changes are important to the community as population increases have the potential to increase pressure on the infrastructure and services. Furthermore, in certain cases population changes can be accompanied by demographic changes. Whether these effects are considered beneficial or adverse depends on the situation in the community and/or the region at the time that the effect takes place.

4.2.1 Community Stability

4.2.1.1 Operations

Effects

The effects of the Project on population in the RSA and LSA are expected to be minimal as the total employment at the mine is expected to increase from approximately 400 in 2014 to 440 in 2015 (part of this increase is associated with Phase IV) and then to 450 where it will remain in 2016 and 2017. Beginning in 2018, the number of positions is scheduled to decrease annually to 350 in 2018, 325 in 2019, 150 in 2020 and 2021, and to 125 in 2022.

Based on the assumption that the proportion of mine employees based within and outside of Yukon remains constant (i.e., 35% of positions were held by Yukon residents in 2012), approximately 32 additional positions are anticipated to be filled by non-Yukon residents and 18 by RSA and LSA residents at peak operations during Phase V/VI. However, Minto anticipates that the proportion of non-Yukon based residents employed at the mine will actually be lower given the measures discussed below aimed at increasing the participation of RSA and LSA residents in the Project.

As almost all employment positions are expected to be based on site and accommodated at the Minto Mine camp, it is not anticipated that employees will relocate to the LSA and commute to work during their two-week shift rotation. It is expected that the majority of employees during operations will commute back to their home communities during the portion of their two week off rotation; though some employees may permanently relocate their families to the RSA or LSA, or find short-term accommodations in the RSA or LSA for their days off.

New employment opportunities associated with project operations do have the potential to attract SFN citizens to relocate to the LSA, which in turn could affect the composition of the local population depending on whether families or individuals returned to the community. However, the lack of SFN residential housing available in Pelly Crossing appears to be a serious inhibitor to community growth.

In addition, the relative lack of services in Pelly Crossing could also constrain growth. Finally, the majority of SFN citizens currently employed on the Project do not live in Pelly Crossing and it is anticipated that any increase in participation by residents of Pelly Crossing would be by those already resident in the community.

Mitigation

The decision as to where workers reside is made by workers on an individual basis. There are specific enhancement measures that will be undertaken to encourage participation of RSA and LSA residents, thereby, reducing the proportion of outside workers. These programs will be a continuation of existing programs as well as new programs as discussed in Section 4.2.1, Section 4.2.2, and Section 4.5.

In addition, Minto will communicate information about the expected duration of positions and requirements to employees and suppliers to help support their transition to other similar positions within the LSA and/or RSA when their work with the mine ends.

Conclusion

Based on the assessment and mitigation described above, Project operations are not anticipated to result in a significant adverse effect on community stability in the RSA or LSA. The effect on community stability in the RSA and LSA during operations is anticipated to be neutral, low magnitude, long-term, and intermittent. Although Minto will house workers at the mine camp and will work to increase the proportion of workers who are current residents of the RSA and LSA, it is possible that some workers may relocate to RSA or LSA communities; however, based on the housing situation and nature of work, the number of individuals who choose to do this is not expected to be large.

As the effects on community stability were not determined to be negative, residual effects were not assessed.

4.2.1.2 Decommissioning and Closure

Effects

It is not anticipated that any of the employees who have not already moved to the RSA or LSA will do so during decommissioning and closure, or that a large number of individuals will leave the RSA or LSA given the expected level of activity in Yukon's mining and mineral exploration industry. Furthermore, it is expected that the majority of the positions during closure will be filled by LSA or RSA residents. Therefore, decommissioning and closure are not anticipated to affect community stability.

Based on the assessment, any effect on community stability in the LSA and RSA during decommissioning and closure is anticipated to be neutral, low magnitude, short-term, intermittent, reversible, and occurring in a resilient area.

Mitigation

Mitigation during decommissioning and closure will be the same as for operations.

Conclusion

Based on the assessment and mitigation described above, decommissioning and closure are not anticipated to result in a significant adverse effect on community stability in the RSA or LSA. The effect on community stability in the RSA and LSA during operations is anticipated to be neutral, low magnitude, short-term, and intermittent as new workers are not expected to move to the community to take advantage of the opportunities during decommissioning and closure and a large number of individuals are not anticipated to leave the area given the anticipated level of economic activity.

As the effects on community stability were not determined to be negative, residual effects were not assessed.

4.2.2 Housing

4.2.2.1 Operations

Effects

Project operations are not expected to have a notable effect on housing in the LSA or RSA given the small incremental number of employees and the fact that Minto will expand the capacity of the mine camp to accommodate all employees on-site during their shifts. More specifically, the camp will be expanded from its current capacity of 192 people to 248 people. The expansion will also include a new kitchen, dining hall, and recreation complex.

The current housing crisis being experienced throughout Yukon is expected to deter many non-Yukon based employees from permanently or temporarily relocating their families to the LSA or RSA. There may be some increased demand for temporary accommodation should workers want to temporarily relocate their families to the RSA. However, as temporary relocations often occur during the summer months when children are not in school, opportunities for temporary relocations for the Project may be limited as summer is also the busiest time for temporary accommodation providers in Yukon and rooms are often difficult to secure.

As the ability for workers to temporarily relocate to the study area will be dependent on availability of accommodation, any impact is anticipated to be positive as increased demand will result in increased revenue for accommodation providers. Further, existing plans for expanding housing units in the RSA are for numbers much larger that the potential demand associated with the Project and any demand would be positive in terms of absorbing new capacity.

Mitigation

Mitigation other than that contained in the Project plan (i.e., expansion of the camp facilities to accommodate all on-shift workers) is not proposed.

Conclusion

Based on the assessment and mitigation described above, Project operations are not anticipated to result in a significant adverse effect on housing in the RSA or LSA. Any effect on housing in the RSA

and LSA during operations is anticipated to be neutral to positive, low magnitude, long-term, and intermittent.

As the effects on housing were not determined to be negative, residual effects were not assessed.

4.2.2.2 Decommissioning and Closure

Effects

Project decommissioning and closure are not expected to have a notable effect on housing in the LSA or RSA, as sudden, significant population changes are not anticipated to occur between operations and decommissioning and closure. Furthermore, the majority of jobs during decommissioning and closure are anticipated to be filled by residents of the RSA and LSA.

Mitigation

Mitigation is not proposed for decommissioning and closure, as the expanded camp will have more than sufficient capacity to house workers during these phases.

Conclusion

Based on the assessment and mitigation described above, decommissioning and closure are not anticipated to result in a significant adverse effect on housing in the RSA or LSA. Based on the assessment, any effect on housing in the RSA and LSA during decommissioning and closure is anticipated to be neutral, low magnitude, short-term, and intermittent.

As the effects on housing were not determined to be negative, residual effects were not assessed.

4.3 Health

This VSEC considers both health conditions (i.e., physical and mental health) and the demand for health services. Given that health and emergency services will continue to be provided at the site. Any demand for health services in the LSA is anticipated to be limited to individuals already securing health services in the LSA. Any demand for services in the RSA is anticipated to be from individuals already securing services in the RSA or from emergencies at the mine that require individuals to be treated at the hospital in Whitehorse.

4.3.1 Health Status and Services

4.3.1.1 Operations

Effects

Project operations are not expected to have a measurable effect on the health conditions of either RSA or LSA residents, based on Minto's current experience, since operations began. However, as noted in the baseline section, information related to health conditions in Pelly Crossing was not available for review during the assessment.

Given that a negligible population increase is anticipated in the RSA and LSA, and that mine employees will access general health services at the mine site, it is not anticipated that there will be an effect on health services. Furthermore, Minto has a health and safety plan in place, and contractors are required to implement health and safety plans specific to the work that they are undertaking. In addition, first aid personnel as well as emergency transportation vehicles will be stationed at the site and general health services (i.e., physical and mental) will also be provided. Any demand for emergency services is anticipated to be based in the RSA rather than LSA as those requiring emergency service will be transported to Whitehorse, where the Yukon's primary acute care facility is located, or another large service center.

The SFN have noted that, in certain cases, individuals behave in ways that can affect their health and the demand for health services (e.g., increased use of alcohol) when they have access to increased financial resources (e.g., royalty payments, employment income). However, as in any community, this was noted to be the exception rather than the rule and, as this is a recognized problem in the community, resources (e.g., SFN Health and Social Programs Department, a regional social worker, etc.) are in place and available for these individuals should they choose to access them. Other stresses such as separation from family were also identified. However, it was also noted that employment is a source of positive self-esteem which, in turn, can provide health benefits to individuals.

Mitigation

Mitigation required for health conditions will be discussed with the SFN based on the findings of the Project effects monitoring program. In terms of health services, Minto will:

- provide health and emergency services at the mine for employees;
- maintain a "no drug or alcohol policy" at the mine site; and
- require contractors to develop and implement health and safety plans.

Conclusion

Based on the experience of the Pelly Crossing and SFN communities to date, the findings of the environmental assessment noted above and the provision of health services at the mine site for employees, Project operations are not anticipated to result in a significant adverse effect on health in the LSA. Based on the above, it is anticipated that the effect on health status and services in the LSA will be neutral or positive, low magnitude, long-term, and intermittent. Health service-related demands in the LSA are anticipated to continue to be primarily from current LSA residents.

However, given that the baseline data for the SFN was not available during this Study, Minto and the SFN have agreed that efforts will be devoted to implementing and utilizing the Project effects monitoring program developed by the tripartite Socio-economic Working Group to advance understanding and management of potential effects on health conditions.

As the effects on health were not determined to be negative, residual effects were not assessed.

4.3.1.2 Decommissioning and Closure

Effects

Although, baseline conditions related to health conditions for the LSA were not available for consideration during this Study, this information will be available prior to decommissioning and closure and will be considered through the Project effects monitoring program.

Two of the primary objectives of the decommissioning and closure phase are:

a) "to protect the health of people pursuing traditional activities including hunting, fishing, trapping, camping and collection of plants for food, medicinal or cultural purposes"; and

b) "to protect people from safety risks when they are pursuing traditional activities including hunting, fishing, trapping, camping, and collection of plants for food, medicinal, or cultural purposes" (Minto 2011b).

It is anticipated that any potential project effects related to health will be identified during the operations phase and that the effects and any required mitigations will continue through to decommissioning and closure.

Mitigation

Mitigation during decommissioning and closure will be the same as that for operations.

Conclusion

As with operations, based on the experience of the Pelly Crossing and SFN communities to date, the findings of the environmental assessment and the provision of health services at the mine site for employees, Project decommissioning and closure are not anticipated to result in a significant adverse effect on health in the LSA. It is anticipated that the effects of decommissioning and closure on health conditions and the demand for health services in the LSA will be neutral to positive, low magnitude, short-term, and intermittent. As with operations, most workers will continue to seek primary health care in their home communities any demand for health services in the LSA will likely be from existing residents.

As the effects on health were not determined to be negative, residual effects were not assessed. However, as noted above, this VSEC will be monitored as part of the Project effects monitoring program being led by the tripartite Socio-economic Working Group.

4.4 Education and Capacity

This VSEC addresses education and training with the focus of education being on general education and the focus of training being on project specific training. Education and training have been important for Minto throughout mine operations, and Minto has worked to develop programs and to encourage mine contractors to develop programs to provide education and training opportunities for employees. These activities will continue through the Project life.

4.4.1 Education and Training

4.4.1.1 Operations

Effects

Education and training will be positively affected during project operations. The Project will result in the enhancement of the skill and education levels of LSA and RSA residents directly through on-the-job training and community based programs, and indirectly through training provided by Minto contractors. Furthermore, the Project will facilitate the continuation of the Minto-SFN scholarship program for advanced education, which was established for SFN citizens as part of the Minto-SFN Cooperation Agreement.

The Project will provide more time for individuals to take advantage of training programs, develop their individual skills and knowledge, and initiate new educational and training programs. The nature of the on-the-job experience and training opportunities will depend on available employment opportunities, the existing employees skill levels, and on the types of positions required. It is also possible that the potential for employment with the mine could encourage residents of the RSA or LSA to independently undertake the training required to take advantage of the opportunities available. The skills and education developed through these initiatives are lifelong and transferable; thus, contributing to effects at the community level in addition to the individual level.

Mitigation

With a view to enhancing the positive effects on education and capacity, Minto will:

- continue and expand cooperation with the Eliza Van Bibber School and Yukon College;
- continue to work with the Minto-SFN employment liaison worker to help ensure that SFN citizens are aware of the types of positions required throughout Phase V/VI to enable interested individuals the opportunity to apply, and/or to obtain the education and/or experience that they may require;
- continue current on-the-job training programs and develop new programs to facilitate new opportunities; and
- continue to develop and support programs and initiatives, as identified in Table 3.26.

Conclusion

Based on the assessment and mitigation described above, Project operations are not anticipated to result in a significant adverse effect on education and training in the RSA or LSA. Based on the assessment, it is anticipated that the effect on education and training in the LSA will be positive, low magnitude, long-term, and intermittent. A variety of education and training opportunities will be offered in the LSA, RSA and at the mine site throughout the mine life with the length of the courses varying according to the topic being taught. Minto will work with the SFN to identify courses in which they are interested and can facilitate employment at the mine.

As the effects on education and training were not determined to be negative, residual effects were not assessed.

4.4.1.2 Decommissioning and Closure

Effects

The positive effects on education and training experienced during operations will continue during decommissioning and closure. However, the training available will change and opportunities during this phase will focus more on skills required during decommissioning and closure and may provide opportunities for individuals with an interest in these areas. As the project approaches closure, education and training opportunities will decrease.

Mitigation

Minto will continue to work with the SFN to enhance opportunities during decommissioning and closure through the enhancement measures identified for operations. The specific nature of the programs will be focused on the needs of the Project during decommissioning and closure.

Conclusion

Based on the assessment and mitigation described above, decommissioning and closure are not anticipated to result in a significant adverse effect on education and training. As such, the effect on education and training in the LSA during decommissioning and closure will be positive, low magnitude, long-term, and intermittent. Individuals will have the opportunity to participate in different types of training that will position them for employment with Minto during decommissioning and closure as well as for other opportunities.

As the effects on education and training were not determined to be negative, residual effects were not assessed.

4.5 Community Wellness

The socio-economic condition of community wellness includes two VSECs in this Study: community well-being and cultural well-being.

4.5.1 Community Well-being

As noted earlier, community well-being is defined differently by every community but generally refers to the environmental, social, and economic conditions that support a quality of life that promote the health and well-being of all residents.

4.5.1.1 Operations

Effects

Project operations will enhance community well-being in the LSA through a number of means including, but not limited to:

- providing employment opportunities for LSA residents;
- contributing indirectly to businesses through supplier contracts;
- potentially improving employee and employee families' mental and physical health as a result of increased opportunities;
- supporting community development through Minto royalties and donations;
- enhancing education and training opportunities through partnerships, programs with local institutions, and organizations to develop the human capital of LSA residents. This would provide them with the necessary skills to secure employment at the Minto Mine and with other employers in the future;
- maintaining Project related traffic at existing levels; and
- limiting activities to the existing mining site to avoid additional environmental disturbance.

Furthermore, project operations will have positive effects on the well-being of communities in the LSA, as assessed according to the CWB Index evaluation by increasing employment opportunities, providing sources of income to residents, and supporting education initiatives.

At an individual level project operations may have some adverse effects in the LSA including:

- Enabling substance abuse patterns (drug and alcohol), by providing financial means through income. This could also have adverse related effects on family violence patterns and crime rates; and
- Affecting employee and employee families' mental and physical health as a result of being separated due to the nature of shift work.

Mitigation

Mitigation related to community well-being will be the mitigation proposed for other VSECs as community well-being encompasses many of the other VSECs.

Conclusion

Based on the assessment and mitigation described above, Project operations are not anticipated to result in a significant adverse effect on community well-being in the LSA. The net effect on community well-being in the LSA is anticipated to be positive, medium magnitude, long-term, and continuous.

However, as with health, community well-being will be monitored as part of the Project effects monitoring program being led by the tripartite Socio-economic Working Group given the number of factors that come together to define community well-being and the fact that the factors affecting community well-being can change over time.

As the effects on community well-being were not determined to be negative, residual effects were not assessed.

4.5.1.2 Decommissioning and Closure

Effects

Activities during decommissioning and closure will continue to enhance community well-being overall through the means identified in the operations section above. Further, SFN involvement in decommissioning and closure may further the sense of community well-being as citizens are involved in returning the site to a more natural state.

Mitigation

Mitigation during decommissioning and closure will be the same as described for operations.

Conclusion

Based on the assessment and mitigation described above, decommissioning and closure are not anticipated to result in a significant adverse effect on community well-being in the LSA. The effect on community well-being in the LSA during decommissioning and closure is anticipated to be positive, medium magnitude, long-term, and continuous.

Further, as noted in Section 4.5.1.1, community well-being will be monitored as part of the community effects monitoring program.

As the effects on community well-being were not determined to be negative, residual effects were not assessed.

4.5.2 Cultural Well-being

The SFN are faced with similar challenges as other Aboriginal communities who are working to maintain their cultural values and well-being, while diversifying and developing activities related to the wage economy. Discrete effects to SFN cultural well-being are not easily attributed to specific project activities and/or phases, as these effects are interrelated with other VSECs and dependent on how such effects are managed at an individual and community level.

4.5.2.1 Operations

Effects

Project operations will have indirect positive and negative influences on SFN cultural well-being through effects on such VSECs as business, employment, income, royalties, and donations.

By increasing the demand for local business and employment opportunities and providing additional income through royalties. Project operations can benefit SFN cultural well-being by providing the financial means to purchase goods and equipment (i.e., vehicle, gas, traps, etc.), which may be necessary to support such cultural activities as hunting, fishing, trapping, food plant, and medicinal plant gathering. Royalties and donations received by the SFN community can also positively affect SFN cultural well-being, by providing direct financial support to SFN cultural programs and initiatives (e.g., Selkirk Spirit Dancers). The degree to which SFN cultural well-being may be positively influenced

by the Project depends on the capacity of individuals and the community to utilize such opportunities.

Increased demand for local business and employment opportunities can also have negative effects on the SFN cultural well-being by acting as a competing activity on the time and availability of individuals. As such, individuals may not have as much time as they previously had to spend on activities related to cultural well-being. The additional income received from business, employment and/or royalties may also effect SFN cultural well-being in a negative manner by providing individuals with the financial resources to purchase goods and/or take part in opportunities that some might feel contribute to the gradual erosion of cultural values and traditional lifestyle.

Mitigation

With a view to continuing to support SFN cultural well-being, Minto will continue to offer employees the opportunity to take a leave to pursue cultural activities, including traditional use activities (i.e., hunting, fishing, trapping, etc.) and government gatherings.

Conclusion

Based on the assessment and mitigation described above, Project operations are not anticipated to result in a significant adverse effect on cultural well-being. The net effect on SFN cultural well-being in the LSA during operations is anticipated to be positive, low magnitude, long-term, and intermittent.

As the effects on cultural well-being were not determined to be negative, residual effects were not assessed.

4.5.2.2 Decommissioning and Closure

Effects

Project effects during decommissioning and closure will be the same as those during operations with the exception of royalties and donations.

Mitigation

Mitigation during decommissioning and closure will be the same as for operations.

Conclusion

Based on the assessment and mitigation described above, decommissioning and closure are not anticipated to result in a significant adverse effect on cultural well-being. The net effect on SFN cultural well-being in the LSA during decommissioning and closure is anticipated to be positive, low magnitude, long-term, and intermittent.

As the effects on cultural well-being were not determined to be negative, residual effects were not assessed.

4.6 Connections to the Land and Water

Connections to the land and water were examined within the LSA, as the SFN culture and community are intrinsically linked to these resources within its traditional territory, and other resource users rely on the land and water surrounding the mine site for economic and other activities.

4.6.1 Traditional and Current Use

4.6.1.1 Operations

Effects

Effects to traditional and current use will be similar to the effects on the traditional economy discussed earlier (Section 4.1.5). Project operations are expected to extend the period of time in which existing site activities continue; thus, prolonging the period of time in which current conditions are experienced rather than creating new effects. Effects are not anticipated to increase as:

- clearing of 82.04 ha of land will take place within the existing Minto lands;
- changes to the nature or volume of traffic travelling to and from the site are not anticipated;
- changes in the frequency or materials used for blasting are not anticipated; and
- environmental studies conducted to date indicate few, if any, project effects on air, noise, water quality, and resources in the LSA.

Nevertheless, as noted earlier, some SFN citizens perceive that mining operations have had adverse effects (e.g., dust, wildlife habitat, effects on fishing, access to timber harvest areas, permafrost, and effects on water quality).

Guide outfitters are currently operating in the area in and around the LSA and it is not anticipated that the Project will have any incremental effect on their operations.

The effects of the Project on the land on which it is situated will continue through operations with the area affected decreasing as progressive reclamation is undertaken.

Mitigation

With a view to continuing to minimize effects on traditional and current use, Minto will:

- undertake progressive reclamation activities throughout operations and consult with the SFN to ensure that closure measures are appropriate and supported by those who are most affected; and
- continue to compensate trapline holders whose traplines directly overlap with the Minto Mine footprint through the existing confidential trapline agreements.

Minto will also implement the mitigation identified in the Phase V/VI environmental effects assessment with a view to minimizing effects on natural resources and, in turn, traditional and current use.

Conclusion

Based on the assessment and mitigation described above, Project operations are not anticipated to result in a significant adverse effect on traditional and current use. The effects during operations in the LSA are anticipated to be neutral, low magnitude, long-term, and continuous as they will essentially be an extension of the exiting Phase IV effects.

As the effects on traditional and current use were not determined to be negative, residual effects were not assessed.

4.6.1.2 Decommissioning and Closure

Effects

As noted in the discussion of traditional economy (Section 4.1.5), the objective of decommissioning and closure is to leave the area as a self-sustaining ecosystem, ensure that the land use (including traditional use activities) is compatible with the surrounding lands, and that the site vegetation returns to a state as near as possible to that in existence prior to mining activities. As such, existing effects on traditional and current use will be reduced as decommissioning and closure related activities advance.

Mitigation

Mitigation will be the same as that described for operations above but with a focus on decommissioning and closure.

Conclusion

Based on the assessment and mitigation described above, decommissioning and closure are not anticipated to result in a significant adverse effect on traditional and current use. The effects during decommissioning and closure in the LSA are anticipated to be positive, low magnitude, long-term, and continuous. As the mine moves through decommissioning and closure larger portions of the disturbed area will be reclaimed and this is anticipated to result in a positive effect on traditional and current use that will continue into the future.

As the effects on traditional and current use were not determined to be negative, residual effects were not assessed.

4.7 Sustainability

The condition of sustainability includes the VSECs of intergenerational equity and the Minto SFN relationship. Intergenerational equity captures how Minto-SFN initiatives and agreements may contribute to current and future positive socio-economic effects on the SFN and its citizens. The SFN-Minto relationship captures the relationship between the SFN and Minto.

4.7.1 Intergenerational Equity

4.7.1.1 Operations

Effects

The SFN have identified that the Project will provide a continued opportunity for the SFN to determine how the mine and its legacy will influence future generations. SFN citizens identified a number of means that could contribute to intergenerational equity including:

- Setting aside Minto Mine royalty money for future SFN generations, including those citizens under the age of 21 when the one-time royalty payment was made to SFN citizens in the summer of 2012 (INT25).
- Providing educational and training opportunities that develop and support life skills and transferrable employment skills would help contribute to positive community development (INT26).
- Creating a diversified economy in Pelly Crossing that would contribute to increased employment opportunities (INT26).

Of these listed initiatives that will support and contribute to intergenerational equity, Minto will focus on the two initiatives related to education and training, and economic diversification. Through these two initiatives, Minto will contribute to increased capacity among SFN citizens, and increased experience for goods and service providers that serve the mine. The effect that royalty funds will have on intergenerational equity will be determined based on the choices the SFN make with regards to management of these monies.

Mitigation

Although key Minto-SFN agreements are confidential and unavailable for consideration in this Study, Minto will undertake the following initiatives during operations with a view to enhancing intergenerational equity:

- work with the SFN on initiatives to help increase the capacity of citizens and strengthen the local economy as identified in the mitigation subsection for the VSECs of education and capacity, business opportunities, and employment opportunities; and
- work with the SFN to identify other means through which Minto could support intergenerational equity.

At the same time, the SFN will have to work to develop policies to address other items identified as being important including determining the means through which royalty payments will be handled as this is outside the scope of Minto's mandate.

Conclusion

Based on the assessment and mitigation described above, Project operations are not anticipated to result in a significant adverse effect on intergenerational equity. The effect of Minto initiatives on intergenerational equity in the LSA is anticipated to be positive, low magnitude, long-term, and continuous as Minto will be paying royalties to the SFN throughout operations and will be providing education, training and business opportunities to SFN citizens.

As the effects on intergenerational equity were not determined to be negative, residual effects were not assessed.

4.7.1.2 Decommissioning and Closure

Effects

The effects during decommissioning and closure will be similar to those experienced during operations with the exception that the SFN will no longer receive royalties from the Project. Minto will continue to support mitigation measures developed to enhance intergenerational equity through decommissioning and closure. This includes those initiatives and programs developed by SFN and Minto to foster with ongoing capacity building among SFN citizens. The effect on SFN from the loss of royalty money during decommissioning and closure, is dependent on how these funds are managed by the SFN.

Mitigation

Mitigation during decommissioning and closure will be the same as those during operations.

ConclusionBased on the assessment and mitigation described above, decommissioning and closure are not anticipated to result in a significant adverse effect on intergenerational equity. The effect of Minto initiatives on intergenerational equity in the LSA is anticipated to continue to be positive, low magnitude, long-term, and continuous.

As the effects on intergenerational equity were not determined to be negative, residual effects were not assessed.

4.7.2 Minto-SFN Relationship

4.7.2.1 Operations

Effects

The Project will provide an opportunity for Minto and the SFN leadership and community to build their relationship. Based on the commitment of both Minto and the SFN to work together, it is anticipated that the Project will result in an enhanced relationship between Minto and the SFN leadership and community.

Mitigation

With a view to enhancing the Minto-SFN relationship, Minto will:

- continue to work with the SFN leadership to identify potential issues related to operations and to identify means through which to address them;
- provide regular updates (e.g., newsletters, meetings) to the SFN community regarding the mine and activities at site;
- continue to participate in the tripartite Socio-economic Working Group; and
- maintain the Minto-SFN employment liaison position established in Phase IV.

Conclusion

Based on the assessment and mitigation described above, Project operations are not anticipated to result in a significant adverse effect on the Minto-SFN relationship. The effect of the Project on the Minto-SFN relationship in the LSA is anticipated to be positive, medium magnitude, long-term, and continuous.

As the effects on the Minto-SFN relationship were not determined to be negative, residual effects were not assessed.

4.7.2.2 Decommissioning and Closure

Effects

Decommissioning and closure will provide an opportunity for Minto and the SFN to maintain, and further enhance, their relationship which they have continued to develop through Project operations.

Mitigation

Mitigation will be the same as that for operations; however, the role of the Minto-SFN employment liaison position will be adjusted to reflect the needs of decommissioning and closure as they are defined during these phases.

Conclusion

Based on the assessment and mitigation described above, decommissioning and closure are not anticipated to result in a significant adverse effect on the Minto-SFN relationship. The effect of the Project on the Minto-SFN relationship in the LSA during decommissioning and closure is anticipated to be positive, low magnitude, short-term, and continuous.

As the effects on the Minto-SFN relationship were not determined to be negative, residual effects were not assessed.

4.8 SEA Summary

The characterization of socio-economic effects presented throughout Section 4, for the Operations and Decommissioning and Closure phases, are summarized below in Table 4.4 and Table 4.5.

Table 4.4 Characterization of Socio-economic Effects during Operations

Socio-economic Condition	VSEC	Magnitude	Spatial Scale	Duration	Direction	Frequency
Material Well-Being	Business Opportunities	Medium Medium	RSA LSA	Long-term Long-term	Positive Positive	Continuous Continuous
	Employment Opportunities	Medium Medium	RSA LSA	Long-term Long-term	Positive Positive	Continuous Continuous
	Employment Income	Medium Medium	RSA LSA	Long-term Long-term	Positive Positive	Continuous Continuous
	Royalties and Donations	Low Medium	RSA LSA	Long-term (Donations) Short-term (Royalties), Long-term (Donations)	Positive Positive	Low Continuous (Royalties); Low (Donations)
	Traditional Economy	Low	LSA	Long-term	Neutral	Continuous
Population	Community Stability	Low Low	RSA LSA	Long-term Long-term	Neutral Neutral	Intermittent Intermittent
	Housing	Low Low	RSA LSA	Long-term Long-term	Neutral to Positive Neutral to Positive	Intermittent Intermittent
Health	Health Status and Services	Low	LSA	Long-term	Neutral or Positive	Intermittent
Education and Capacity	Education and Training	Low	LSA	Long-term	Positive	Intermittent
Community Wellness	Community Well-Being	Medium	LSA	Long-term	Positive	Continuous
	Cultural Well-being	Low	LSA	Long-term	Positive	Intermittent
Connections to the Land and Water	Traditional and Current Use	Low	LSA	Long-term	Neutral	Continuous
Sustainability	Intergenerational Equity	Low	LSA	Long-term	Positive	Continuous
	Minto – SFN Relationship	Medium	LSA	Long-term	Positive	Continuous

Table 4.5 Characterization of Socio-economic Effects during Decommissioning and Closure

Socio-economic Condition	VSEC	Magnitude	Spatial Scale	Duration	Direction	Frequency
Material Well-Being	**Business Opportunities**	Low Low	RSA LSA	Long-term Long-term	Positive Positive	Continuous Continuous
	Employment Opportunities	Low Low	RSA LSA	Long-term Long-term	Positive Positive	Continuous Continuous
	Employment Income	Low Low	RSA LSA	Short-term Short-term	Positive Positive	Continuous Continuous
	Royalties and Donations[25]	Low Low	RSA LSA	Short-term Short-term	Neutral to Positive Neutral to Positive	Low Low
	Traditional Economy	Low	LSA	Long-term	Positive	Continuous
Population	**Community Stability**	Low Low	RSA LSA	Short-term Short-term	Neutral Neutral	Intermittent Intermittent
	Housing	Low	RSA LSA	Short-term Short-term	Neutral Neutral	Intermittent Intermittent
Health	**Health Status and Services**	Low	LSA	Short-term	Positive	Intermittent
Education and Capacity	**Education and Training**	Low	LSA	Long-term	Positive	Intermittent
Community Wellness	**Community Well-Being**	Medium	LSA	Long term	Neutral	Continuous
	Cultural Well-Being	Low	LSA	Long-term	Positive	Intermittent
Connections *to* the Land and Water	**Traditional and Current Use**	Low	LSA	Long-term	Positive	Continuous
Sustainability	**Intergenerational Equity**	Low	LSA	Long-term	Positive	Continuous
	Minto – SFN Relationship	Low	LSA	Short-term	Positive	Continuous

[25] As royalties will not be paid during decommissioning and closure, this characterization refers to donations only.

5 CUMULATIVE EFFECTS ASSESSMENT

As per the effects assessment results of individual VSECs, adverse residual effects related to the Project were not identified and as such, there will be no interaction between adverse residual effects of the Project and those of other projects.

In terms of positive project-related residual effects, it is possible, depending on the timing of other developments in Yukon (e.g., reasonably foreseeable projects currently proceeding through YESAA review), that certain positive residual effects could act cumulatively with other projects to enhance positive effects or to create potentially adverse effects on other VSECs. For example, an increased demand for employees, and goods and services by other projects could act cumulatively with the demand from the Project to create ongoing and additional opportunities for LSA and RSA residents. However, the increased demand for workers, and goods and services could also result in an influx of workers to Yukon, which could in turn, potentially adversely affect housing, services, infrastructure, community stability, etc.

The actual cumulative effects will depend on the timing of other activities, the scale of the demand, worker housing plans (e.g., camps), etc. Furthermore, projects currently proceeding through permitting and future projects will have considered the current situation in Yukon, which includes the Minto Project, in their baseline and cumulative effects assessments.

Based on currently available information, it is not possible to accurately determine the significance of potential cumulative effects. Therefore, as stated earlier, Minto remains committed to contributing to the cumulative effects monitoring program that the SFN and YG are developing through the tripartite Socio-economic Working Group. Given the expected life of the Project, commencement of this program to address broader regional and cumulative effects remains a high priority and commitment for Minto working in close collaboration with the SFN and YG.

6 CLOSING

We trust that this report presents the *Minto Phase V/VI Socio-economic Study*, which was conducted specifically for the Minto Phase V/VI YESAA proposal. Should you like any additional information, or if you have any other questions, please do not hesitate to contact Debra Lamash at 604-251-8448.

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REFERENCES

Aboriginal Affairs and Northern Development Canada (AANDC). 2012. Selkirk First Nation Registered Population- December 2012. Accessed on January 7, 2012. Last updated on 2012/06/28. Available at: http://pse5-esd5.ainc-inac.gc.ca/fnp/Main/Search/FNRegPopulation.aspx?BAND_NUMBER=498&lang=eng.

Aboriginal Affairs and Northern Development Canada (AANDC). 2012b. The Community Well-Being Index: Review of Trends for First Nation Communities. ISBN:978-1-100-21126-8. Last updated on 2012/09/04. Available at: http://www.aadnc-aandc.gc.ca/DAM/DAM-INTER-HQ-AI/STAGING/texte-text/rs_pubs_cwb_rotffnc_1344537779771_eng.pdf

Aboriginal Affairs and Northern Development Canada (AANDC). 2012c. Yukon – Well-Being in First Nations Communities: The Community Well-Being Index 2006. Last updated: 2011/11/21. Available at: http://www.aadnc-aandc.gc.ca/eng/1321885696378/1321885822901.

Aboriginal Affairs and Northern Development Canada (AANDC). 2011. Yukon-2006 Community Well-Being Database. Accessed on March 11, 2013. Last updated on 2011/02/23. Available at: http://www.aadnc-aandc.gc.ca/eng/1298476332304/1298476475435.

DPRA. 2011. Easing the Housing Crisis: Land Availability and Policies as Barriers to the Yukon's Economic Growth: A Workshop, Whitehorse, Yukon, May 10, 2011- Workshop Report. Submitted to the Whitehorse Chamber of Commerce.

Greer, S. 1994. Minto Area Archaeology and History: Final Report of the Minto Archaeological Impact Assessment Project (Permit #94-6, Yukon Archaeological Sites Regulation), November 1994. Prepared for Yukon Heritage Branch, Whitehorse; Selkirk First Nation, Pelly Crossing; and Minto Explorations Ltd, Vancouver.

Government of Yukon and Statistics Canada. N.d. First Nation Community Profiles: Selkirk First Nation – Community of Pelly Crossing. Accessed on: 10/4/2012. Available at: http://www.eco.gov.yk.ca/pdf/FN_Com_Profile_SFN_LH_Ed.pdf

Government of Yukon. 2013. Pelly Crossing Public School Enrollment, Eliza Van Bibber. Available at: http://www.sewp.gov.yk.ca/data?regionId=YK.PC&subjectId=EDUC&groupId=EDUC.COMPULS&dataId=YBS_SCHOOL_ENROLMENT&tab=region

Government of Yukon. 2013b. Yukon Licensed Child Care Centres and Family Day Home Programs. Accessed on 4/30/2013. Available at: http://www.hss.gov.yk.ca/pdf/licensedchildcarecentres.pdf.

Government of Yukon. 2012. Pelly Crossing, Population Estimates, based on Yukon Health Care Registration File. Last Updated: 2012-12-21. Available at: http://www.sewp.gov.yk.ca/data?regionId=YK.PC&subjectId=POPCOM&groupId=POPCOM.POP&dataId=YBS_HCRF_POP_AGE_SEX&tab=region.

Government of Yukon. 2011. Pelly Crossing Businesses and Employees. Last Updated 2011-03-31. Available at: http://www.sewp.gov.yk.ca/data?regionId=YK.PC&subjectId=ECON&groupId=ECON.ACTIV&dataId=YBS_BUSINESSES&tab=region

Hallam Knight Piesold Ltd. 1994. Volume III: Socioeconomic Description and Impact Assessment, December 1994. Prepared for Minto Explorations Limited.

Indian and Northern Affairs Canada. 2008. Community Wellbeing Index, Selkirk First Nation. Last Modified: 2008/12/11. Accessed on 6/10/2010. Available at: http://pse5-esd5.ainc-inac.gc.ca/fnp/Main/Search/FNWellbeing.aspx?BAND_NUMBER=498

Inukshuk Planning & Development. 2007. Selkirk First Nation/Pelly Crossing Integrated Community Sustainability Plan 2007, May 2007. Available at: http://www.infrastructure.gov.yk.ca/pdf/selkirk_fn_pelly_crossing_icsp_final.pdf.

Klohn Crippen Berger (KCB). 2011. Selkirk First Nation Traditional Knowledge Study: Baseline Report (Draft).

Mease, A.M. 2008. Once the Land is For Certain: The Selkirk First Nation Approach to Land Management, 1997-2007. Unpublished Master's Thesis. University of Saskatoon, Saskatoon, Saskatchewan.

Minto Explorations Ltd. 2012. Minto Mine Expansion – Phase V/VI, Draft Project Description, October 2012.

Minto Explorations Ltd. 2012b. Minto Phase VI Preliminary Feasibility Study Technical Report (July 2012), Effective Date: January 1, 2012. Available at: http://capstonemining.com/i/pdf/PFS.pdf

Minto Explorations Ltd. 2011. Minto Mine Emergency Response Plan, September 2011. Available at: http://www.emr.gov.yk.ca/mining/pdf/mml_minto_emergency_response_plan_september_2011.pdf.

Minto Explorations Ltd. 2011b. Decommissioning and Reclamation Plan, Revision 3.2 June 2011, Issued for Review.

Minto Explorations Ltd. 2010. Project Proposal, Phase IV Mine Expansion, Minto Mine, Yukon Territory (November 2010).

Nelson, M., Natcher, D.C., and C.G. Hickey. 2005. Social and Economic Barriers to Subsistence Harvesting in Aboriginal Communities. In D.C. Natcher (Eds.), *Seeing Beyond the Trees: The Social Dimensions of Aboriginal Forest Management* (pp.41-61).

Northwest Resources Consulting Group. N.d. Minto Mine Socio-Economic Monitoring Program – Possible Components and Information Requirements (Draft 2).

Precision Research Services, 2009. March 2009 Yukon Roads Inventory: Department of Community Services Community Affairs Branch- DRAFT. Available at: http://www.infrastructure.gov.yk.ca/pdf/yukon_roads_inventory.pdf.

SRK Consulting. 2011. Minto Phase V Preliminary Feasibility Study Technical Report, December 2010., Effective Date: December 15, 2010. Available at: http://capstonemining.com/i/pdf/Minto-Phase-V-PFS-Tech-Report.pdf

SRK Consulting. 2009. Minto Phase IV Pre-Feasibility Technical Report, December 2009. Available at: http://capstonemining.com/i/pdf/IV-PFS.pdf

Statistics Canada. 2013. Average weekly earnings (including overtime), educational and related services, by province and territory, CANSIM Table 281-0027 and Catalogue no. 72-002-X. Last Updated 2013-03-27. Available at: http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/educ05-eng.htm.

Statistics Canada. 2013b. Pelly Crossing Employment Insurance Beneficiaries, from the Employment Insurance Statistics Program, Special Tabulation. Last Updated: 2013-02-28. Available at: http://www.sewp.gov.yk.ca/data?regionId=YK.PC&subjectId=ECON&groupId=ECON.LBF&dataId=STATSCAN_EI_BEN&tab=region

Statistics Canada. 2013c. Whitehorse (City of) Employment Insurance Beneficiaries, from the Employment Insurance Statistics Program, Special Tabulation. Last Updated: 2013-02-28. Available at: http://www.sewp.gov.yk.ca/data?regionId=YK.WH&subjectId=ECON&groupId=ECON.LBF&dataId=STATSCAN_EI_BEN&tab=region.

Statistics Canada. 2013c. Dawson City Employment Insurance Beneficiaries, from the Employment Insurance Statistics Program, Special Tabulation. Last Updated: 2013-02-28. Available at: http://www.sewp.gov.yk.ca/data?regionId=YK.DW&subjectId=ECON&groupId=ECON.LBF&dataId=STATSCAN_EI_BEN&tab=region.

Statistics Canada. 2012. Pelly Crossing, Yukon (Code 6001041) and Yukon, Yukon (Code 6001) (table). *Census Profile.* 2011 Census. Statistics Canada catalogue no. 98-316-XWE. Ottawa. Released September 19, 2012. Accessed on October 3, 2012. Available at: http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/index.cfm?Lang=E.

Statistics Canada. 2012b. *Whitehorse, Yukon (Code 6001009) and Yukon, Yukon (Code 6001)* (table). *Census Profile.* 2011 Census. Statistics Canada Catalogue no. 98-316-XWE. Ottawa. Released May 29, 2012. http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/index.cfm?Lang=E. (accessed August 1, 2012).

Statistics Canada. 2012c. *Carcross, Yukon (Code 6001048) and Yukon (Code 6001) (table). Census Profile.* 2011 Census. Statistics Canada Catalogue no. 98-316-XWE. Ottawa. Released October 24, 2012. http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/index.cfm?Lang=E (accessed December 10, 2012).

Statistics Canada. 2012d. *Carmacks, Yukon (Code 6001012) and Yukon (Code 6001) (table). Census Profile.* 2011 Census. Statistics Canada Catalogue no. 98-316-XWE. Ottawa. Released September 19, 2012. http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/index.cfm?Lang=E (accessed October 3, 2012).

Statistics Canada. 2012e. Median total income, by family type, by province and territory (All census families), CANSIM 111-0009. Last modified: 2012-06-27. Available at: http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/famil108a-eng.htm.

Statistics Canada. 2008. Profile for Canada, Provinces, Territories, Census Divisions and Census Subdivisions, 2006 Census (table). Cumulative Electronic Profiles. Statistics Canada Catalogue no. 95F0495XCB01001. Ottawa. May 01, 2008. Version modified July 29,2008. http://www12.statcan.ca/english/census06/data/profiles/release/ListProducts.cfm?Temporal=2006&APATH=3&THEME=81&PTYPE=89103&GRP=1 (accessed November 7, 2008). Statistics Canada. 2009. 2006 Semi-custom Profile of Yukon CSD Aggregations, 2006 Census (table). CRO0104245. Ottawa. March 17, 2009.

Statistics Canada. 2007. *Pelly Crossing, Yukon Territory (code 6001041)* (table). 2006 *Community Profiles.* 2006 Census. Statistics Canada Catalogue no. 92-591-XWE. Ottawa. Released March 13, 2007. http://www12.statcan.ca/census-recensement/2006/dp-pd/prof/92-591/index.cfm?Lang=E. (accessed December 17, 2012).

Statistics Canada. 2007b. *Whitehorse, Yukon Territory (Code 990)* (table). *2006 Community Profiles.* 2006 Census. Statistics Canada Catalogue no. 92-591-XWE. Ottawa. Released March 13, 2007. http://www12.statcan.ca/census-recensement/2006/dp--pd/prof/92-591/index.cfm?Lang=E. (accessed December 13, 2012).

Statistics Canada. 2007c. *Carcross, Yukon Territory (Code 6001048)* (table). 2006 *Community Profiles.* 2006 Census. Statistics Canada Catalogue no. 92-591-XWE. Ottawa. Released March 13, 2007. http://www12.statcan.ca/census-recensement/2006/dp-pd/prof/92-591/index.cfm?Lang=E. (accessed December 13, 2012).

Statistics Canada. 2007d. *Carmacks, Yukon Territory (Code 6001012)* (table). *2006 Community Profiles.* 2006 Census. Statistics Canada Catalogue no. 92-591-XWE. Ottawa. Released March 13, 2007. http://www12.statcan.ca/census-recensement/2006/dp-pd/prof/92-591/index.cfm?Lang=E. (accessed December 13, 2012).

Statistics Canada. 2003. Profile for Canada, Provinces, Territories, Census Divisions and Census Subdivisions, 2001 Census (table). Cumulative Electronic Profiles. Statistics Canada Catalogue no. 95F0495XCB01001. Ottawa. October 22, 2003.

http://www12.statcan.ca/english/census01/products/standard/profiles/ListProducts.cfm?Temporal=2001&APATH=3&RL=9&FREE=0 (accessed November 7, 2008). Statistics Canada. 2009. 2001 Census Semi-Custom Profile of Selected CSD Aggregates in Yukon, 2001 Census (tables). J5543 and CRO0105914. Ottawa. November 7, 2008.

Statistics Canada. 2002. 2001 Community Profiles- Pelly Crossing. Released June 27, 2002. Last modified: 2005-11-30. Statistics Canada Catalogue no. 93F0053XIE. Accessed on January 9, 2013. Available at: http://www12.statcan.ca/english/Profil01/CP01/Index.cfm?Lang=E.

Trophy Stone Outfitting Ltd. 2010. Trophy Stone Outfitting Price List WEBPAGE. Accessed on January 8, 2013. Available at: http://www.yukonhunting.com/Pricelist.html.

Western Copper and Gold. 2013. Casino Project, Snapshot. Accessed on May 30, 2013. Available at: http://www.westerncopperandgold.com/casino/snapshot/.

Yukon Bureau of Statistics (YBOS). 2013. Yukon Employment, February 2013. Accessed on March 14, 2013. Available at: http://www.eco.gov.yk.ca/stats/pdf/employment_feb13.pdf.

Yukon Bureau of Statistics (YBOS). 2013b. Yukon Employment Annual Review 2012, Information Sheet No. 80.06. Available at: http://www.eco.gov.yk.ca/stats/pdf/employment_2012.pdf.

Yukon Bureau of Statistics (YBOS). 2013. Yukon Fuel Survey February 2013. Accessed on March 9, 2013. Available at: http://www.eco.gov.yk.ca/stats/pdf/fuel_feb13.pdf.

Yukon Bureau of Statistics (YBOS). 2012. Population Report: June 2012 (updated), Information Sheet No. 58.41- Nov 2012. Accessed on November 5, 2012. Available at: http://www.eco.gov.yk.ca/stats/pdf/populationJun(r)_2012.pdf

Yukon Bureau of Statistics (YBOS). 2012b. Yukon Employment November 2012. Available at: http://www.eco.gov.yk.ca/stats/pdf/employment_nov12.pdf

Yukon Bureau of Statistics (YBOS). 2012c. Yukon Monthly Statistical Review, October 2012. Available at: http://www.eco.gov.yk.ca/stats/pdf/mr_oct2012.pdf.

Yukon Bureau of Statistics (YBOS). 2012d. Pelly Crossing- Crime Rates. Available at: http://www.sewp.gov.yk.ca/data?regionId=YK.PC&subjectId=POPCOM&groupId=POPCOM.CRIME&dataId=YBS_CRIME_RATES&tab=region.

Yukon Bureau of Statistics (YBOS). 2012e. Whitehorse- Crime Rates. Available at: http://www.sewp.gov.yk.ca/data?regionId=YK.WH&subjectId=POPCOM&groupId=POPCOM.CRIME&dataId=YBS_CRIME_RATES&tab=region.

Yukon Bureau of Statistics (YBOS). 2012f. Carcross- Crime Rates. Available at: http://www.sewp.gov.yk.ca/data?regionId=YK.CC&subjectId=POPCOM&groupId=POPCOM.CRIME&dataId=YBS_CRIME_RATES&tab=region.

Yukon Bureau of Statistics (YBOS). 2012g. Carmacks- Crime Rates. Available at: http://www.sewp.gov.yk.ca/data?regionId=YK.CM&subjectId=POPCOM&groupId=POPCOM.CRIME&dataId=YBS_CRIME_RATES&tab=region.

Yukon Bureau of Statistics (YBOS). 2011. Yukon Business Survey 2010. Accessed on November 5, 2012. Available at: http://www.eco.gov.yk.ca/fr/pdf/2010_Business_Survey_Report.pdf.

Yukon Bureau of Statistics (YBOS). 2009. Labour, Census 2006. Available at: http://www.eco.gov.yk.ca/stats/pdf/2006_labour.pdf.

Yukon College. 2013. Yukon College Communities. Accessed March 13, 2013, from http://www.yukoncollege.yk.ca/about/communities.

Yukon Education. N.d.. Eliza Van Bibber School School Growth Plan 2012/2013. Last updated: Unknown. Accessed on 10/31/2912. Available at: http://www.yesnet.yk.ca/schools/evbs/pdf/12-13/sgp_evbs_12_13.pdf.

Yukon Education. 2013. School Directory. Accessed March 13, 2013, from: http://www.education.gov.yk.ca/psb/directory.html.

Yukon Education. 2012. Eliza Van Bibber School Review Report. Accessed on October 31, 2012. Available at: http://www.yesnet.yk.ca/schools/evbs/pdf/12-13/srr_evbs_april_3_4_12.pdf.

Yukon Education. 2012b. Community-based Training Funds. Accessed on March 14, 2013. Last updated on 10/5/2012. Available at: http://www.education.gov.yk.ca/advanceded/ctf/ctf_heritage.html.

Yukon Environmental and Socio-economic Assessment Board (YESAB). 2006. Guide to Socio-economic Effects Assessments (V. 2006.06). Accessed on 8/13/2012. Available at: http://www.yesab.ca/publications/documents/SEEAFinal200606.pdf

Yukon Environmental and Socio-economic Assessment Board (YESAB). 2005. Assessment of Cumulative Effects, July 2005. Available at: http://www.yesab.ca/documents/Cumulativeeffectsfactsheet2.pdf

Yukon Environmental and Socio-economic Assessment Act, S.C. 2003, C.7. Last amended on April 1, 2005, Current to October 31, 2012. Available at: http://laws-lois.justice.gc.ca/PDF/Y-2.2.pdf. Accessed on November 22, 2012.

Yukon Health and Social Services. 2006. Yukon Nursing Services. Accessed on March 14, 2013. Available at: http://www.hss.gov.yk.ca/pdf/community_nursing_map.pdf.

Yukon Highways and Public Works. 2011. 2011 Yukon Traffic Count Summary. Accessed on February 5, 2013. Available at: http://www.hpw.gov.yk.ca/pdf/traf2011.pdf.

Yukon Highways and Public Works. 2010. Pelly River Bridge. Accessed on November 6, 2012. Last updated on 7/5/2010. Available at: http://www.hpw.gov.yk.ca/trans/engineering/1169.html.

Yukon Housing Corporation. 2012. Yukon Housing in your Community. Accessed on March 6, 2013. Available at: http://www.housing.yk.ca/pdf/CS_YHC_Yukon_map_(july12).pdf.

Yukon Government. 2013. Yukon Economic Review 2012, February 5, 2013. Available at: http://economics.gov.yk.ca/Files/Outlook2012_review.pdf

Yukon Government. 2012. News Release - Mining royalties benefit Yukoners, for release #12-185 on October 9, 2012. Accessed on October 30, 2012. Available at: http://www.gov.yk.ca/news/2011/files/12-185.pdf.

Yukon Government. 2004. Yukon Community Profiles – Pelly Crossing, The Economy. Available at: http://www.yukoncommunities.yk.ca/communities/pelly/economy/