APPENDIX 8 – JRP SIR 69b –

SUPPLEMENTAL INFORMATION FOR THE PIERRE RIVER MINE PROJECT – ASSESSMENT OF SOCIO-ECONOMIC EFFECTS ON ABORIGINAL GROUPS

Submitted to Shell Canada Limited

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October 2013

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1. Introduction

The Joint Review Panel (JRP) established to review the Pierre River Mine (PRM) Project has made a supplementary information request (SIR) of Shell as follows:

> *69b) provide an assessment of the socio-economic effects for each First Nation or Aboriginal group respecting Aboriginal rights and interests before and after reclamation.*

This document contains the response to JRP SIR 69b. It was prepared by Nichols Applied Management on behalf of Shell. Nichols Applied Management also conducted the original socio-economic impact assessment (SEIA) filed in the December 2007 Jackpine Mine Expansion (JME) and Pierre River Mine Project application (as updated).

The response to JRP SIR 69b builds on the response given to the same question (JRP SIR 30) put forward during the recent Shell JME regulatory review process (*May 2012: Submission of Information to the Joint Review Panel*), taking into consideration:

- responses by the Alberta Energy Resources Conservation Board (now the Alberta Energy Regulator [AER]), Aboriginal groups, other stakeholders and intervenors to recent oil sands SEIAs in the course of the regulatory review process, including public hearings;
- other relevant information that has been updated or become available since spring 2012 (e.g., Statistics Canada data); and
- additional interviews with representatives of agencies and authorities that participate in the development and/or delivery of programs and services for Aboriginal community members.

2. Assessment Scope

2.1 Project Impact Model

The following impact model identifies the pathways by which Shell's Pierre River Mine (PRM) Project may impact socio-economic conditions.

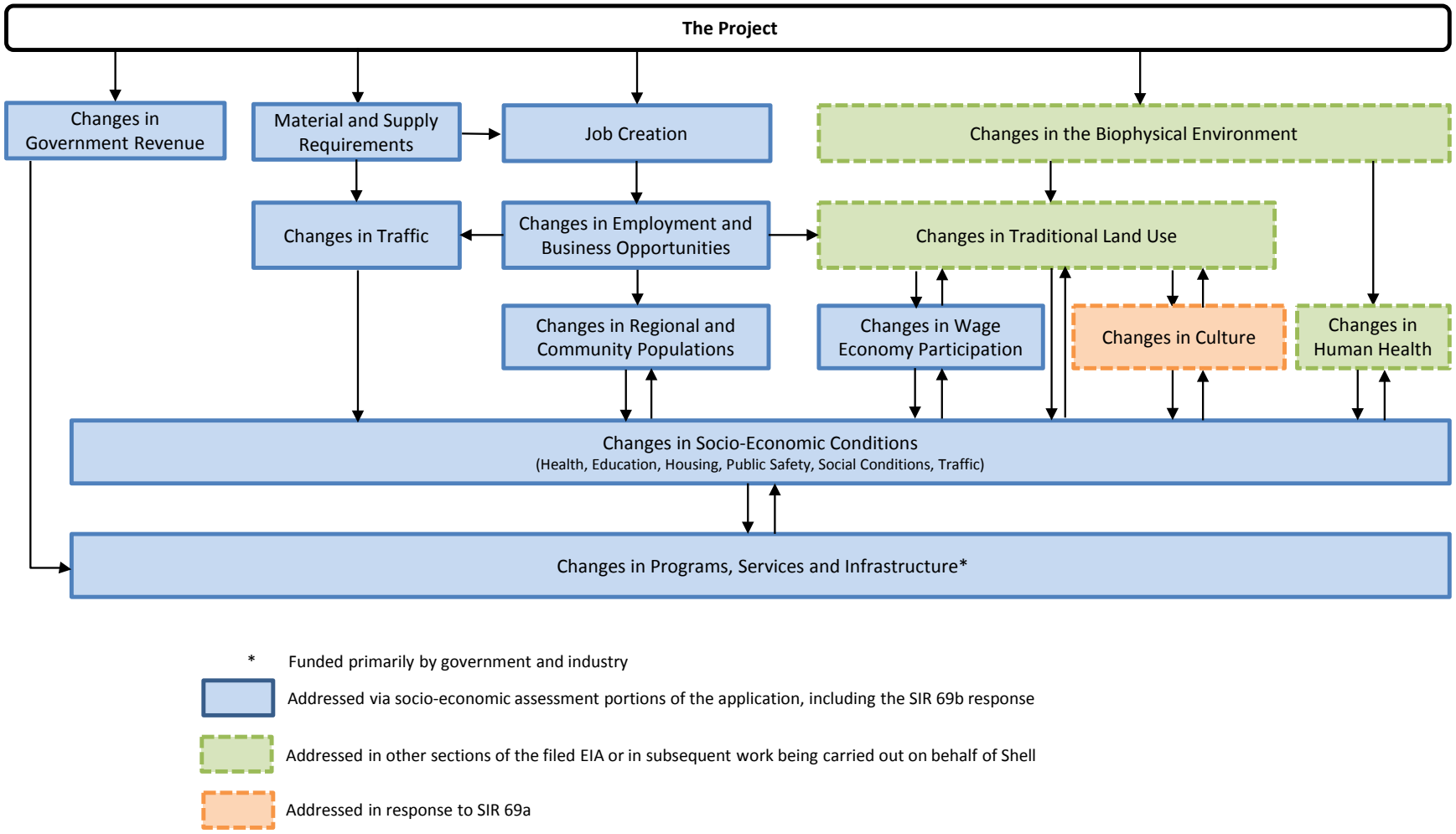
Nichols Applied Management has been engaged in socio-economic work in the region for over 30 years. The model draws on this past socio-economic work, including previous socio-economic impact assessments, as well as past socio-economic studies and reports (e.g., Radke Report, Sustainable Community Indicators report), and issues and concerns raised by local Aboriginal groups and stakeholders.

The model demonstrates that the Project, like oil sands development in general, affects socio-economic conditions through a number of pathways including:

- changes in the biophysical environment and associated changes in traditional land use and human health;
- job creation and associated population growth;
- materials and supply requirements, and associated changes in traffic; and
- changes in government revenue and associated changes in programs, services and infrastructure.

A number of the effect pathways and the effects themselves relate to Aboriginal rights and interests. While socio-economic effects are addressed in the socio-economic impact assessment, a number of the pathways by which socio-economic conditions are also impacted (e.g., changes in culture, human health, traditional land use) are specifically addressed in other sections of the filed EIA or in subsequent work being carried out on behalf of Shell.

Figure 2.1 Impact Model



2.2 Key Questions

The impact model gives rise to a number of relevant impact questions for the socio-economic assessment of effects of the Project on First Nations and Aboriginal groups including:

- Will the project change population levels for communities in the region?
- Will the project change economic conditions for Aboriginal residents in the region?
- Will the project affect the health and well-being of Aboriginal residents in the region?
- Will the project affect housing conditions and housing programs for Aboriginal residents in the region?
- Will the project affect skill levels, education attainment, and education and training services of Aboriginal residents in the region?
- Will the project affect public safety and protection in communities in the region?
- Will project-related socio-economic changes affect the traditional land use of Aboriginal residents in the region?
- Will project effects on traditional land use drive further socio-economic changes for Aboriginal residents in the region?

The filed SEIA answers many of these questions at a regional level. This assessment will attempt to answer these questions in regards to First Nations and Aboriginal groups, where possible. Socio-economic effects which are largely regional or provincial in scope, such as changes in government revenues and changes in traffic, are dealt with in the filed socio-economic impact assessment (SEIA) and associated updates and SIRs.

2.3 Key Indicators

Socio-economic impact assessments are a key component to addressing the effects of a project on the human environment. This suggests that the focus of the impact assessment should be people. The analysis addresses different aspects of people's lives, including:

- people as economic beings, suggesting the key indicators of participation in the wage and traditional economies, training, and income; and

- people as social beings, suggesting the following key indicators:
  - population,
  - health and well-being,
  - housing conditions,
  - education attainment,
  - public safety, and
  - traditional land use (TLU).[1]

Some indicators are well-suited for quantification, providing easy-to-interpret measures for the anticipated project effects (e.g., unemployment rates), while others are treated mostly qualitatively (e.g., health and well-being).

2.4 Other Influences

Changes in the human environment are brought about by far more than just one project. Table 2.1 outlines a number of factors which have both positive and negative influences on the human environment of Aboriginal peoples in the region.

Table 2.1 External Influences on Aboriginal Peoples

External Influences	Effect	Example
Industry (e.g., resource development)	+	• employment creation • funding for community initiatives and cultural retention programs
	–	• reduced access and increased disturbance to land • increased population growth placing increased demands on services and infrastructure used by Aboriginal persons
Government (e.g., policies, programs, funding)	+	• government policies limiting access to traditional use areas by non-traditional users • funding for community initiatives and cultural retention programs
	–	• government policies/initiatives directly or indirectly opening up access to traditional areas (e.g., roads)
Education	+	• incorporation of traditional values in the curriculum or delivery of education services
	–	• compulsory mainstream education curriculum and delivery that limits opportunities for traditional knowledge transfer
Other Influences (e.g., TV, internet, technology)	+	• Aboriginal TV programming • increased access and information sharing pertaining to other Aboriginal communities and traditional culture
	–	• mainstream movies, TV, music, that display cultural values and norms that run contrary to traditional values.

[1] TLU effects are discussed here as they relate to socio-economic variables such as changes in population and wage employment. TLU effects and effects on culture are assessed separately in Shell's filed application, accompanying updates, and SIR responses.

This assessment, like most SEIAs, will give attention to and place the project in the context of other influences on the human environment, including industry and non-industry development. Where possible, our assessment will attribute changes in the human environment to the project (e.g., population changes, employment creation). However, changes in the human environment are often the result of varying and sometimes competing forces. Changes in the human environment can sometimes generate other changes, causing a ripple effect. As such it is not always possible to clearly attribute changes to specific oil sands projects, oil sands development in general, or other external factors such as government policy, education and technology.

2.5 Approach

2.5.1 General

This SIR response takes into account other work carried out by or on behalf of Shell as part of the regulatory review process, including:

- socio-economic work already completed, including the filed SEIA and subsequent SEIA updates;
- the response provided in 2012 to JRP SIR 32 posed by the JRP for the Shell JME project;
- responses to other PRM JRP SIRs, including:
  - a Pre-Industrial Case and 2013 Base Case, 2013 PRM Application Case, and 2013 Planned Development Case (2013 PDC); and
  - a cultural effects review (JRP SIR 69a).

The assessment also draws on a number of data sources, outlined in Section 2.5.5. In addition, the assessment draws on consultations that Shell has been carrying out with Aboriginal groups in the area for many years, as well as other studies and reports prepared by, or on behalf of, Aboriginal groups in the area. This includes additional information brought forward by Aboriginal groups as part of the recent regulatory review process for Shell's JME.

The views and values expressed by Aboriginal groups through these data sources were important in informing this assessment. While development of this SIR response was not community led, it is not without community input.

2.5.2 Level of Analysis

The assessment has largely been done at the community level: i.e., distinguishing effects by Aboriginal people in Fort McMurray, Fort Chipewyan, and Fort McKay. This approach reflects the common threads in socio-economic issues and concerns that have been

raised by Fort McKay First Nation, the Mikisew Cree First Nation, the Athabasca Chipewyan First Nation, the Fort McMurray First Nation, Fort McKay Métis Local 63, Fort Chipewyan Métis Local 125, and Fort McMurray Métis Local 1935 in consultations with Shell and reviews of Shell's filed SEIA. The choice to conduct the analysis mostly on the level of communities is also informed by the following:

- much of the secondary data is only available at a regional or community level;
- a number of the socio-economic effects experienced by Aboriginal people are largely dependent upon factors related to the community in which they live (e.g., proximity to development, services and amenities available); and
- the largest group of Aboriginal people in the region is the Aboriginal population of Fort McMurray, comprised of both First Nations and Métis members.

The appropriateness of the choice to conduct the analysis mostly on the level of communities was born out by the interviews with service providers, including interviews carried out for this study. In many instances service providers were unable to distinguish membership of a particular Aboriginal group among their clientele. They were, by and large, able to identify their clientele's community (i.e., Aboriginal peoples in Fort Chipewyan as compared to Aboriginal peoples in Fort McKay). In a few cases, especially with housing, some distinctions could be identified between Métis and First Nation members.

Although the assessment has been largely done at the community level, it is recognized that the Joint Review Panel and others have an interest in identifying issues and concerns by each First Nation and Aboriginal group. As such, summary tables have been provided in this assessment that help differentiate information by individual Aboriginal group, to the extent possible. Summary tables are provided after Sections 4.1 (Population), 4.2 (Wage Economy), 4.3 (Health and Well-Being), 4.4 (Housing), and 4.5 (Education). For Section 4.7 (Traditional Land Use), information by individual Aboriginal group is discussed in Appendix 7 (Cultural Effects Review) and the TLU assessment (Appendix 2, Section 3.5.1, Appendix 3.8).

2.5.3 Study Area Boundaries

The assessment focus will be on Aboriginal people living in and around Fort McMurray as well as communities in the northern portion of the Regional Municipality of Wood Buffalo (RMWB), including:

- Fort McKay, located at the confluence of the Athabasca and MacKay Rivers, approximately 65 km north of Fort McMurray, accessible via Highway 63;

- Fort Chipewyan, located on the western shores of Lake Athabasca, approximately 225 km north of Fort McMurray, accessible by air and winter road; and

- reserve lands located around and north of Fort McMurray.

Because Project-specific socio-economic effects are expected to be non-existent or very small on communities further south of Fort McMurray, these communities and Aboriginal groups are not included in the analysis.

2.5.4 Temporal Boundaries

To provide a reference for the assessment, a summary of historical conditions at specific points in time has been provided. This summary draws on information contained in the Pre-Industrial Case (Appendix 2, Section 2) and cultural effects review (Appendix 7).

Assessment of Project effects covers the economic life of the Project. The analysis also provides a qualitative discussion of the socio-economic effects anticipated after closure and reclamation.

2.5.5 Data Sources

The information used in this analysis comes from a variety of sources, including:

- studies and reports prepared by, or on behalf of, Aboriginal groups in the area;

- consultations carried out by Shell with First Nations and Métis groups in the region;

- interviews with selected representatives of agencies and authorities that participate in the development and/or delivery of programs and services for Aboriginal community members;

- government sources, including municipal and federal censuses, Statistics Canada surveys, and municipal and provincial planning documents;

- industry sources, including regulatory applications of oil sands projects in the region;

- the regulator, other stakeholders and interveners to recent oil sands socio-economic impact assessments during the regulatory review process, including public hearings;

- academic sources, including the Royal Society of Canada Expert Panel report;

- media sources, including *Fort McMurray Today*; and

- online sources, including: websites for Aboriginal groups and Aboriginal businesses; local, provincial and federal government departments; and industrial operators and associations.

2.5.6 Data Limitations

There are limitations with the available data. Data for small geographies is sometimes unavailable for reasons of confidentiality and coverage of Aboriginal communities even by Statistics Canada is not always complete. Where data is available for small communities, the comparability of that data over time is often challenged by changes in data collection, definition, and methodology, making it difficult to draw firm conclusions with respect to trends.

Many data sources also rely on respondents' self-identification as Aboriginal persons, which may or may not align with the membership criteria of the First Nations or the Métis Nation of Alberta. The Alberta Human Rights Act prohibits employers to ask job applicants to furnish any information concerning (among other) race, religious beliefs, ancestry, or place of origin (AHRC 2013).

3. Socio-Economic Setting

3.1 Historical Context

3.1.1 Pre-Contact

Human habitation of northeastern Alberta dates back 10,000 years or more. In pre-contact time, the Aboriginal people of the region lived semi-nomadic lives, moving between locations depending on the season and the relative abundance of hunting, trapping, and fishing opportunities. Small family groups would come together in late summer to early fall when resources were more abundant and then disperse to winter hunting grounds.

3.1.2 European Contact

Europeans first came to the region as explorers and fur traders in the 18th century. For local Aboriginal peoples, the arrival of Europeans led to increased and ongoing interactions by way of:

- the fur trade;
- the treaty process;
- the development of transportation links with outside communities;
- exposure to new diseases;

- the arrival of missionaries and Christian churches; and
- the establishment of residential schools.

The way of life for local Aboriginal peoples was significantly affected by these interactions: trapping came to supplement traditional hunting, fishing and gathering activities; reserves were established for the Aboriginal population of the area; goods and services from outside the region became available; and daily activities and interactions changed as a result of exposure to non-Aboriginal ways and traditions.

Additional information pertaining to the pre-development context for Aboriginal groups who reside in the region can be found in Appendix 2, Section 2 and Appendix 7 (JRP SIR 69a Cultural Effects Review).

3.1.3 1960s to 1980s

As of the early 1960s, the area was still a relatively isolated part of the province with a small, predominantly Aboriginal population. Prior to 1966 there was no all-weather road access from the region to the southern parts of the province. Ground transportation to the region was dependent on the railway, completed in the early 1920s, or on winter access via forestry roads.

The living patterns of Aboriginal peoples in the region began changing in the early 1960s as they settled more permanently in stable communities as a result of the declining fur trade and under the pressure of government policies. As part of the same process, they were obliged to rely increasingly on government transfer payments and the surrounding wage economy to supplement their livelihood from traditional hunting and gathering activities. Aboriginal persons in the region engaged in various wage-employment opportunities in renewable resource sectors, such as fishing and forestry.

Development of the oil sands industry started on a commercial scale with construction of the Great Canadian Oil Sands Plant (now Suncor Energy Inc., Oil Sands) in the mid-1960s. Construction of the Syncrude Canada Ltd. facility in the 1970s marked the first expansion phase of the oil sands industry. These developments, combined with associated growth in other sectors of the economy, increased the regional population from approximately 2,600 in the early 1960s to over 36,000 by 1985. Most of this growth occurred in Fort McMurray which accounted for over 90% of the regional population in 1985. Growth in the outlying areas was more modest and many communities, such as Fort McKay and Fort Chipewyan remained largely Aboriginal (AOSERP 1979, AMA 1975, 1980).

For Aboriginal peoples in the region, oil sands development offered employment and training opportunities in closer proximity to home communities, and support for community capacity-building initiatives. At the same time, development led to the take-

up of traditional lands, an expansion of the non-Aboriginal population, and increasing concerns regarding the potential for negative environmental effects.

3.1.4 1980s to Current Day

After a period of little industrial growth and relative stability in the region's population between 1986 and 1996, the second expansion phase of the oil sands industry again brought rapid change. From 1999 to 2008 the resident population nearly doubled from 39,280 to 74,160 with virtually all growth taking place in and around Fort McMurray. More recently, delays in oil sands project schedules in the wake of the financial crisis of 2008 has led to more moderate growth in the region's resident population.

Outlying communities saw fluctuations in their population with community members leaving the community in search of employment and training opportunities, and then returning to it, in part to avoid high housing prices in the urban centre.

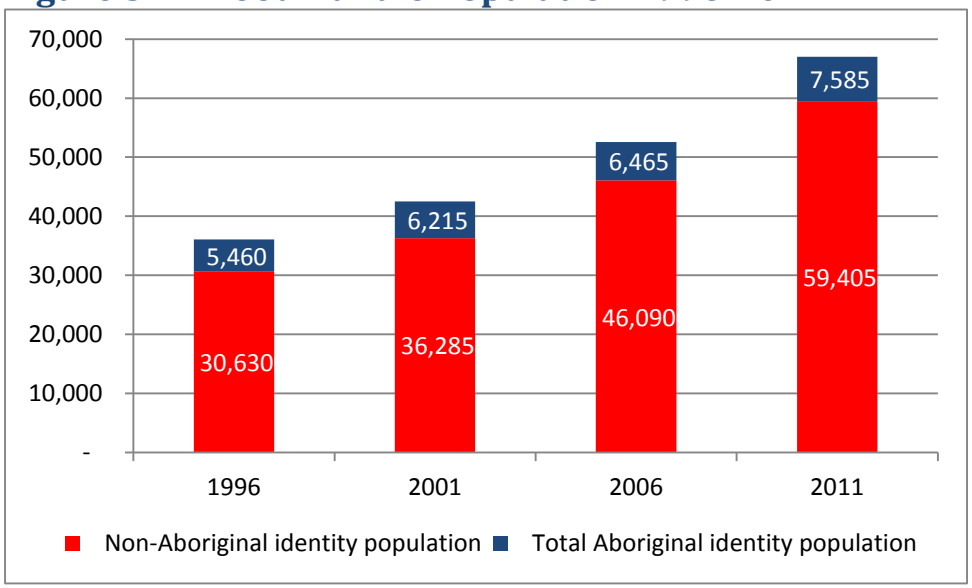
During this period there was also substantial growth in the region's non-resident population with growing numbers of temporary construction camps being established, so that by 2012 nearly 40,000 workers, or over 95% of the non-resident population, lived in camps.

Also during this period, Aboriginal peoples in the region began having increasing concerns that the environmental effects related to industrial development were having an effect on their way of life. The taking up of land and use of regional water sources by industry contributed to a declining reliance on traditional harvesting and fewer traditional practices being carried out. This, in turn, helped drive socio-economic change within Aboriginal communities by increasing the reliance of local Aboriginal peoples on non-traditional activities for their livelihood as well as contributing to ongoing social changes within the community (e.g., changes in family and community practices and relations).

3.2 Aboriginal Population

Figure 3.1 shows changes in the Aboriginal and non-Aboriginal population in the Wood Buffalo area between 1996 and 2011 based on Statistics Canada census and National Household Survey (NHS) results. Over this 15-year timeframe, the Aboriginal population grew by 39% while the non-Aboriginal population grew by 94%.

Figure 3.1 Wood Buffalo Population 1996-2011[1]



Sources: Statistics Canada. Federal Census (1996, 2001, 2006)
Statistics Canada. 2013. National Household Survey Community Profiles. 2011

Note: 1) Wood Buffalo Census Agglomeration (CA).
2) Non-Aboriginal identity population does not include a substantial number of people who live in the urban areas and the work camps in the region and who maintain a primary address elsewhere.

Nearly all the non-Aboriginal population growth over this time frame accrued to the urban service area of the region. As a result, Fort McMurray has grown into one of Alberta's larger urban centres.

Table 3.1 provides an estimate of the Aboriginal and non-Aboriginal populations for communities in the Study Area for 2011.

Table 3.1 Population Estimates for Communities in the Study Area (2011)

	Fort McMurray		Fort McKay		Fort Chipewyan[1]		Selected Reserves[3]	
	#	%	#	%	#	%	#	%
Non-Aboriginal[4]	56,835	92%	40	7%	95	7%	15	3%
Aboriginal	4,870	8%	525	93%	1,195	93%	460	97%
First Nation	2,325	4%	490	87%	915	71%	435	92%
Métis	2,255	4%	35	6%	205	16%	25	5%
Other Aboriginal[2]	295	0%	0	0%	65	5%	0	0%
TOTAL	61,705	100%	565	100%	1,290	100%	475	100%

Source: Statistics Canada. 2013. National Household Survey Community Profiles. 2011

Notes:
1) Data from the 2011 Federal Census indicates that the population of Fort Chipewyan in 2011 was 847. Data presented above, indicating a population of 1,290 in Fort Chipewyan, is from the National Household Survey (2011). A possible reason for the discrepancy is that census information was collected from 100% of the population while National Household Survey information was collected from a 33% sample (from a random sample of one in three households) with the data weighted up to provide estimates for the entire population. For any given geographic area, the weighted population, household, dwelling or family total or subtotal may differ from that shown in reports containing data collected on a 100% basis. Such variation (in addition to the effect of random rounding) will be due to sampling.
2) The Other Aboriginal category is comprised of those who identified themselves as Inuit, provided multiple Aboriginal identity responses, or identified themselves as Registered Indians and/or band members without identifying themselves as North American Indian, Métis or Inuit in the Aboriginal identity question.
3) Selected Reserves include the reserve communities of the Mikisew Cree First Nation, Athabasca Chipewyan First Nation and the Fort McMurray First Nation.
4) Non-Aboriginal identity population does not include a substantial number of people who live in the urban areas and the work camps in the region and who maintain a primary address elsewhere.

Data presented in Table 3.1 show that:

- First Nation members make up the majority of community members in Fort Chipewyan, Fort McKay, and selected reserves in the area;
- the Aboriginal identity population living in Fort MacKay and Fort Chipewyan also includes Métis peoples (6% and 16% of the total community population, respectively); and
- nearly 70% of the Aboriginal identity population – well over half of the Métis population and just over half of the First Nations population in the area – live in Fort McMurray.

Demographic data indicates that the Aboriginal population is considerably younger than the overall population, similar to other Aboriginal populations across Canada. Median ages for the Aboriginal identity population in Fort McMurray and communities north are under 30, as compared to 31.8 and 36.5 for the total population in the RMWB and Alberta, respectively.

Table 3.2 Age Characteristics (2011)

	Fort McMurray	Fort MacKay	Fort Chipewyan	Selected Reserves	RMWB	Alberta
	Aboriginal Identity Population				*Total Population*	
Median age (years)	26.6	28.1	28.4	34.1	31.8	36.5
Under 15 years of age (% of pop.)	22.4%	29.5%	33.1%	20.7%	18.7%	18.8%
15 to 24 years of age (% of pop.)	23.7%	15.2%	13.0%	17.4%	15.2%	13.6%
25 to 44 years of age (% of pop.)	31.6%	31.4%	25.5%	26.1%	39.4%	29.7%
45 to 64 years of age (% of pop.)	20.9%	20.0%	18.4%	26.1%	24.9%	26.8%
Over 64 years of age (% of pop.)	0.4%	5.7%	10.0%	4.3%	1.8%	11.1%

Source: Statistics Canada. 2013. National Household Survey Community Profiles. 2011
Note: Selected Reserves include the reserve communities of the Mikisew Cree First Nation, Athabasca Chipewyan First Nation and the Fort McMurray First Nation.

A larger percentage of the Aboriginal identity population in Fort McMurray is of working age (15-64 years old) than in Fort McKay, Fort Chipewyan and on selected reserves. This is a potential indicator of the economic opportunities available in Fort McMurray and their draw for working-age Aboriginal people from other communities.

3.3 First Nations and Métis Locals

The study area is home to several First Nations and Métis Locals. Additional information regarding the formation of each First Nation can be found in Appendix 7, Section 1.8.

3.3.1 Athabasca Chipewyan First Nation

The Athabasca Chipewyan First Nation (ACFN) are members of the Dene Suline or Chipewyan cultural group. With the rise of the fur trade in the 18th and 19th centuries, and the establishment of Fort Chipewyan, many Chipewyan people in the area began to reside more permanently near the Fort and traded there in the spring and fall. Over time, as a result of a number of factors including decline in the fur trade, government policies, the signing of Treaty 8, changes in the environment, and industrial impacts, many came to use the Fort as a base and settle in and near Fort Chipewyan (ACFN 2011, ATC 2009a).

The ACFN has eight reserve areas in the Athabasca Delta and on the south shore of Lake Athabasca. Total land area of their reserves is approximately 34,760 ha (AANDC, 2012).

The ACFN had approximately 1,082 members as of March 2013 (Table 3.3). About 240 members live on reserve or Crown land, mostly in Fort Chipewyan. The remainder of the registered population, 78%, reside off-reserve, mainly in Fort McMurray and Edmonton.

Since 2000, the ACFN registered population has grown by 385 members, or over 50%. The majority of this growth was in the population not on reserve or Crown land. The population on reserve and Crown land grew slightly, and as a share of the total registered population has decreased from 32% to 22%.

Table 3.3 ACFN Registered Population

Residency	2000		2013	
	# of People	% of People	# of People	% of People
On Reserve or Crown Land	221	32%	240	22%
Off-Reserve	476	68%	842	78%
Total	697	100%	1,082	100%

Source: Aboriginal Affairs and Northern Development Canada (AANDC). Registered Population. Available at: http://pse5-esd5.ainc-inac.gc.ca/FNP/Main/Search/FNRegPopulation.aspx?BAND_NUMBER=463&lang=eng

3.3.2 Mikisew Cree First Nation

The Mikisew Cree First Nation (MCFN) is part of the Western Woods Cree cultural group which resides in communities in Manitoba, Saskatchewan and Alberta. Cree were among the first indigenous people west of the Hudson Bay to trade with the Europeans. When Fort Chipewyan was established in the late 18th century, the Cree were already established as trading partners in the region. By the late 19th century many Cree resided in several key village areas for part of the year relying on hunting and gathering supplemented by the fur trade (MCFN 2012a). Over time, as a result of a number of factors including decline in the fur trade, government policies, the signing of Treaty 8, changes in the environment, and industrial impacts, many came to use the Fort as a base and settle in and near Fort Chipewyan (MCFN 2012a, MCFN 2009a).

The MCFN has nine reserve areas in and around Fort Chipewyan. Total land area of their reserves is approximately 5,111 ha (AANDC 2012).

The MCFN is the largest First Nation in the region with over 2,800 members as of March 2013. The two most populated MCFN reserves are Allison Bay 219 and Dog Head 218 which lie on the north and south sides of Fort Chipewyan respectively. While a number of members live in and around Fort Chipewyan, many members also live in the vicinity of Fort McKay and Fort McMurray (MCFN 2012b).

Since 2000, the MCFN registered population has grown by 686 members, or over 30%. The majority of this growth was in the off-reserve population. The on-reserve population grew slightly during this timeframe, and as a share of the total registered population has decreased from 33% to 27%.

Table 3.4 MCFN Registered Population

Residency	2000		2013	
	# of People	% of People	# of People	% of People
On Reserve or Crown Land	728	33%	784	27%
Off-Reserve	1,451	67%	2,081	73%
Total	2,179	100%[1]	2,865	100%

1. Totals may not add to 100% due to rounding.

Source: Aboriginal Affairs and Northern Development Canada (AANDC). Registered Population. Available at: http://pse5-esd5.ainc-inac.gc.ca/FNP/Main/Search/FNRegPopulation.aspx?BAND_NUMBER=461&lang=eng

3.3.3 Fort McKay First Nation

The Fort McKay First Nation (FMFN) is composed of Cree and Dene people who lived a nomadic lifestyle along the Athabasca River prior to the introduction of the fur trade. In 1820, the Hudson Bay Company established a fur trade post at what is today Fort McKay. As Cree and Dene people in the area became more reliant on the fur trade they began settling in closer proximity to Fort McKay. As with other First Nations in the region, a number of factors including decline in the fur trade, government policies, and the signing of Treaty 8 led many First Nation members to settle in more permanent communities such as Fort McKay (FMIRC 2010).

The FMFN has three reserve areas in and around Fort McKay. There are an additional two reserves at Namur and Gardiner Lakes, approximately 50 km northwest of Fort McKay, which are largely unoccupied. Total land area of the FMFN reserves is approximately 14,886 ha (AANDC 2012). The FMFN signed a specific land claim in 2006, which added 23,000 acres of reserve land in the minable oil sands area.

The FMFN had approximately 778 members as of March 2013. A majority of these members live in and around Fort McKay. A number of members also live in Fort McMurray, Edmonton, and other locales outside the region.

Since 2000, the FMFN registered population has grown by 283 members, or over 55%. The on-reserve population accounted for 45% of this growth, increasing by 128 members.

Table 3.5 FMFN Registered Population

Residency	2000		2013	
	# of People	% of People	# of People	% of People
On Reserve or Crown Land	264	53%	392	50%
Off-Reserve	231	47%	386	50%
Total	495	100%	778	100%

Source: Aboriginal Affairs and Northern Development Canada (AANDC). Registered Population. Available at: http://pse5-esd5.ainc-inac.gc.ca/FNP/Main/Search/FNRegPopulation.aspx?BAND_NUMBER=467&lang=eng

3.3.4 Fort McMurray First Nation

Members of the Fort McMurray First Nation (FMcFN) can trace their collective ancestry to the Woodland and Plains Cree and also the Chipewyan and Beaver people of Alberta (FMcFN 2006). They were originally part of the same band as Fort McKay, but divided in 1942 (ATC 2009b).

The FMcFN reserve areas consist of the Clearwater reserve which is located 20 kilometres east of Fort McMurray, and three other areas located on Gregoire Lake, approximately 50 kilometres southeast of Fort McMurray. Total land area of the FMcFN reserves is approximately 3,231 ha (OSDG 2008).

The FMcFN had approximately 688 members as of March 2013. Although Gregoire Lake Reserve #176 is the largest and most populated reserve, the majority of members (61%) live off-reserve, mainly in Fort McMurray.

Since 2000, the FMcFN registered population has grown by 156 members, or nearly 30%. The on-reserve population grew during this timeframe, but as a share of the total registered population has decreased somewhat from 44% to 39%.

Table 3.6 FMcFN Registered Population

Residency	2000		2013	
	# of People	% of People	# of People	% of People
On Reserve or Crown Land	232	44%	270	39%
Off-Reserve	300	56%	418	61%
Total	532	100%	688	100%

Source: Aboriginal Affairs and Northern Development Canada (AANDC). Registered Population. Available at: http://pse5-esd5.ainc-inac.gc.ca/FNP/Main/Search/FNRegPopulation.aspx?BAND_NUMBER=467&lang=eng

3.3.5 Métis Locals

The arrival of Europeans in Western Canada led to intermarriages between fur traders of various ethnicities (e.g., English, French, and Scottish) and Aboriginal peoples. These marriages not only provided a link between fur traders and indigenous peoples, but also led over time to new and distinctive Aboriginal communities. The Métis played an important role in the fur trade of Western Canada, incorporating knowledge and traditions from both their Aboriginal and European ancestries.

The majority of Métis people in the area, over 2,000, live in Fort McMurray. They also reside in Fort McKay and Fort Chipewyan where they account for 14% and 15% of the Aboriginal identity population respectively (Table 3.1).

The Métis Nation of Alberta (MNA) is the representative organization of the Métis in Alberta. It is formally organized into six zones, with each zone containing a number of registered Métis Locals. The study area lies within MNA Zone 1 and is home to the following locals:

- Fort Chipewyan Métis Local 125;
- Fort McKay Métis Local 63;
- Fort McMurray Métis Local 1935; and
- Fort McMurray Métis Local 2020.

3.4 Roles and Responsibilities

An analysis of socio-economic effects gives consideration to the availing programs, policies, systems and services in place to handle and address effects. For Aboriginal peoples in the region a variety of responsible agencies and authorities are engaged in planning for and delivering services.

3.4.1 First Nations

Each First Nation in the study area is governed by an elected Chief and Council. Governments of First Nations administer services required by their members, including housing, social services, and infrastructure development.

In addition, each First Nation in the region has established Industry Relations Corporations (IRCs) or Government and Industry Relations (GIR) organizations. Between 2007-2009, industry provided approximately $22 million in funding for IRCs/GIRs, including funding paid by project proponents for project-specific reviews. The IRCs/GIRs facilitate and support ongoing communication with industry and government on existing and planned oil sands development.

The MCFN, ACFN, FMFN and FMcFN, along with the Chipewyan Prairie Dene First Nation to the south of Fort McMurray, together comprise the Athabasca Tribal Council (ATC). Through the ATC, the member First Nations work together on matters of common interest.

3.4.2 The Métis Nation of Alberta (MNA)

The MNA has a variety of affiliated institutions and structures engaged in offering socio-economic and cultural support in a variety of sectors to Métis people and communities. The key one is the Rupertsland Institute that provides Métis training and employment services. The MNA and its affiliates also provide some services with regards to child and family services, housing, health and wellness, and others.

Métis Locals do not have the same resourcing or administrative and programming capacity as First Nations in the area. They also have do not have the same internal infrastructure, such as Industry Relations Corporations, to engage with external stakeholders such as industry. Indications are that internal capacity among Métis Locals is improving. On some issues, Métis and First Nations within the same community (e.g., Fort McMurray, Fort Chipewyan) attempt to work collaboratively for the betterment of both their peoples.

3.4.3 Federal Government

The federal government is responsible for delivering education, housing, community infrastructure, and social support to First Nation people on reserves. More generally, it also provides funding support to certain regional services and infrastructure projects. Examples include affordable housing, road infrastructure, policing services, and the regional airport.

3.4.4 The Regional Municipality of Wood Buffalo

The RMWB is responsible for planning residential growth, providing sufficient quality water, wastewater and solid waste facilities and services, planning, building, operating, and maintaining arterial roads, emergency services, delivering selected social services, and ensuring adequate recreation facilities. The RMWB has service agreements with Aboriginal Affairs and Northern Development Canada to deliver some municipal services on reserve. An example is the delivery of water and wastewater services in Fort McKay.

3.4.5 Provincial Government

The provincial government has primary responsibility for public service delivery to the people in the region, including Aboriginal persons other than those living on reserves. Key areas of responsibility include health care and education that are delivered, either directly or by means of provincially funded agencies. The provincial government also provides funding support for affordable housing, Aboriginal affairs, policing, emergency services, and social services. Provincial grants are also provided directly to the RMWB to assist in funding municipal infrastructure and services.

In 2007, the provincial government established the Oil Sands Sustainable Development Secretariat to coordinate and improve planning, communications, and service delivery to Alberta's oil sands regions, including the Wood Buffalo region.

3.4.6 Private Sector Service Providers and Industry

Numerous private sector agencies, both profit and not-for-profit, play a key role in providing social infrastructure and services in the region, particularly in the areas of social services, child care and health care. Industrial proponents in the region also provide a number of onsite project-related services (e.g., health services, emergency services, recreational infrastructure, security) as well as funding and resources to a variety of community, social and charitable activities, events, and organizations in the region.

4. Socio-Economic Effects

4.1 Population

4.1.1 Situation Analysis

4.1.1.1 Introduction

The dynamic nature of the demographics in the RMWB makes estimating the population size difficult, especially because of the high number of boarders living in private residences (e.g., renting rooms or illegal suites). The most recent population estimate from the 2012 municipal census indicates a regional population of 116,400.[2] This includes the non-resident population staying in project accommodations (i.e., camp workers).

The following section provides information on the resident urban and rural populations, as well as the non-resident population. Table 4.2 provides a summary of information as it applies to individual Aboriginal groups, to the extent possible.

4.1.1.2 Resident Urban Population

The most recent Federal Census (2011) population estimate for Fort McMurray is 61,374 and the 2012 municipal census estimates the resident urban population in the range of 73,000 people.[3,4] As shown in Table 3.1, above, some 4,800 Aboriginal persons (or over 70% of all Aboriginal persons in the study area) were living in the urban service area in 2011, accounting for approximately 8% of the resident population of Fort McMurray.[5]

As residents of the urban service area, these Aboriginal community members experience a number of socio-economic conditions including:

- a relatively high cost of living, driven especially by housing costs;
- increased competition for and expansion of services, amenities, and infrastructure as a result of recent growth; and

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2 Population counts, forecasts, and methods have been the subject of considerable discussion between the RMWB and various departments of the Alberta government.

3 While the Federal Census captures a large portion of the population occupying owned or rented dwellings, it does not capture those who have a residence in the region but maintain a primary residence elsewhere. Nor does the Federal Census capture those occupying camp-based or other temporary dwellings.

4 Totals do not include the community of Draper (197 people) and the hamlet of Saprae Creek (925), both of which are close to and largely act as bedroom communities to Fort McMurray.

5 As counted by the Statistics Canada 2011 National Household Survey (NHS).

- increased employment and contracting opportunities but also challenges in accessing these opportunities (e.g., lack educational requirements).

4.1.1.3 Resident Rural Population

Table 4.1 provides a population estimate for rural communities in the study area, including reserves. Fort Chipewyan is the largest among the communities, accounting for some 48% of the total. These estimates draw on several sources (e.g., municipal and federal censuses and the National Household Survey) and should be interpreted with caution due to the fluid demographic situation in many small communities and the shortcomings of most published data sources on population levels there.

Table 4.1 Resident Rural Population

Community	Estimated Population
Fort Chipewyan	1,010
Fort McKay	620
Reserves[1]	475
Total	2,105

Sources: RMWB Municipal Census 2012, Statistics Canada 2011 Census, Statistics Canada 2011 National Household Survey.
Notes: 1) Includes the reserve lands of the ACFN, MCFN, FMFN, and FMcFN.

These communities are largely Aboriginal (Section 3.2). Population changes in these communities relate mostly to community level demographic pressures, which include:

- a young population with a high birth rate relative to the population of Fort McMurray; and

- a mobile population with people leaving the community in search of education, training and employment opportunities, and returning to it, in part to avoid high housing prices in the urban centre.

Some Aboriginal peoples have noted negative experiences when moving from rural communities to larger urban centres, such as Fort McMurray. These are further noted in Section 4.3.1.2, below.

4.1.1.4 Non-Resident Population

The non-resident population has grown considerably over the past decade, from about 6,000 people in 2000 to over 40,000 in 2012 (RMWB 2012a). Approximately 95% of the non-resident population lives in work camps both north and south of Fort McMurray. The remaining non-resident population lives primarily in hotels, motels and campgrounds in, or near, the urban service area. A 2007 survey of mobile workers indicates that at that time, Aboriginal people made up an estimated 15% of mobile workers (Nichols, 2007).

Most of the workforce camps are temporary construction camps, but there are an increasing number of permanent operations camps. As oil sands operations move farther from the urban service area, additional permanent operations lodges are being established in light of health, safety and worker efficiency considerations.

As the size of the camp-based population has grown, camp providers have increased the breadth and quality of on-site camp amenities and services including security, health and recreational services. Improvements have also been made in the content and layout of individual rooms and shared spaces, quality of food services available and free-time activities offered.

Because most camp-based workers reside permanently outside the region, work camps:

- reduce the effects of industrial development on the resident population of the RMWB;
- reduce the effects of industrial development on regional service providers and infrastructure;
- reduce the number of workers with spouses and family members in the region who would otherwise be available to fill job vacancies in the region;
- allow spouses and family members of camp-based workers to remain active in the labour force in the community in which they permanently reside; and
- spread the economic benefits of industrial development to other communities.

4.1.2 Effects Assessment

4.1.2.1 Project Effects

Shell's PRM Project will not be a sizeable driver of population growth in the region. The PRM Project is expected to lead to an urban service area population that is 4.5% higher than the 2013 Base Case in both 2021 and 2024, during peak construction activity. After 2024, when construction is complete and the project has reached full operations hiring, the long-term population impact of the project is expected to be about 1% above the 2013 Base Case.

Much of the Project's population impact will be mitigated by the Project's:

- remote location;
- use of a camp-based model for housing workers during both construction and operations; and
- use of a fly-in/fly-out approach to transporting workers in and out of the region.

The Project is not expected to have a direct population effect on Fort McKay or Fort Chipewyan. To the degree that Shell supports economic activity in Fort Chipewyan and Fort McKay – via employment and business contracts with local Aboriginal workers and businesses, including its fly-in/fly-out (FIFO) program for employees residing in Fort Chipewyan – the Project may assist in retaining current Aboriginal peoples in these communities or attracting Aboriginal peoples back to these communities from other locations.

The Project will contribute to the region's camp-based population during both construction and operations. The on-site camps will be full service, with health care, security, emergency, and recreation facilities and services, thus limiting the need for workers to visit local communities or engage with local Aboriginal peoples outside the Project Development Area.

The analysis of the population effect does not allow for a distinction between the different First Nations and the other Aboriginal Groups.

4.1.2.2 Future Development

Under 2013 PDC assumptions, the population of Fort McMurray is expected to grow from approximately 76,000 in 2012, to nearly 137,870 in 2030. Population growth is anticipated to vary by period in response to oil sands project activity. Specifically, the population of Fort McMurray is expected to:

- grow at an average annual rate of 5.1% between 2012 and 2015;
- slow to an annual average growth rate of 1.8% between 2016 and 2024; and
- accelerate to an annual average growth rate of 4.7% between 2024 and 2030.

Population projections are open to considerable uncertainty and, therefore, should be treated as estimates only and not as certain outcomes. Population projections and associated methodology are further discussed in Appendix 2, Section 3.5.2.

With respect to rural communities, the growth scenario used in the RMWB's Municipal Development Plan (RMWB 2011) suggests an average annual population growth of 2.2% in the small, mostly Aboriginal communities in the region. Fort McKay and Fort Chipewyan are designated as "areas of stability" where "rapid growth is not desired and where the existing character and structure of the community is to be respected."

Table 4.2 Summary of Issues by Aboriginal Group: Population

All Groups	ACFN Members on Reserve and in Fort Chipewyan	MCFN Members on Reserve and in Fort Chipewyan	Métis Members in Fort Chipewyan	FMFN Members in Fort McKay	Métis Members in Fort McKay	FMcFN Members on Reserve	FMcFN and Other Aboriginal Group Members in Fort McMurray
• Between 1996 and 2011, the Aboriginal population in the Regional Municipality of Wood Buffalo (RMWB) grew by 38%, from 4,570 to 6,315. • Over 70% of the Aboriginal identity population and over half of the First Nations population in the study area live in Fort McMurray. • The Aboriginal population is considerably younger than the overall population, similar to other Aboriginal populations across Canada. Median ages for the Aboriginal identity population in Fort McMurray and communities north are 30 or under, as compared to 31.8 and 36.5 for the total population in the RMWB and Alberta, respectively. • The non-resident population of the region has grown considerably over the past decade, from about 6,000 people in 2000 to over 40,000 in 2012. Approximately 95% of the non-resident population live in work camps both north and south of Fort McMurray. A 2007 survey of mobile workers indicates that at that time, Aboriginal people made up an estimated 15% of mobile workers.	• Fort Chipewyan is a largely Aboriginal community. Over 70% of the population are members of a First Nation, including ACFN. • The median age for the Aboriginal identity population in Fort Chipewyan is 28.4. • The ACFN had approximately 1,082 members as of March 2013. About 240 members live on reserve or Crown land, mostly in Fort Chipewyan. The remainder of the registered population, 78%, reside off-reserve and Crown land, mainly in Fort McMurray and Edmonton. • Population changes in rural communities in Wood Buffalo relate mostly to community level demographic pressures, which include: a young population with a high birth rate relative to the population of Fort McMurray; and a mobile population with people leaving the community in search of education, training and employment opportunities, and returning to it, in part to avoid high housing prices in the urban centre.	• Fort Chipewyan is a largely Aboriginal community. Over 70% of the population are members of a First Nation, including MCFN. • The median age for the Aboriginal identity population in Fort Chipewyan is 28.4. • The MCFN is the largest First Nation in the region with over 2,800 members as of March 2013. While a number of members live in and around Fort Chipewyan, including on MCFN reserves, many members also live in the vicinity of Fort McKay and Fort McMurray. • Population changes in rural communities in Wood Buffalo relate mostly to community level demographic pressures, which include: a young population with a high birth rate relative to the population of Fort McMurray; and a mobile population with people leaving the community in search of education, training and employment opportunities, and returning to it, in part to avoid high housing prices in the urban centre.	• Fort Chipewyan is a largely Aboriginal community. Approximately over 200 Métis people live in Fort Chipewyan, comprising 16% of the total population. • The median age for the Aboriginal identity population in Fort Chipewyan is 28.4. • Population changes in rural communities in Wood Buffalo relate mostly to community level demographic pressures, which include: a young population with a high birth rate relative to the population of Fort McMurray; and a mobile population with people leaving the community in search of education, training and employment opportunities, and returning to it, in part to avoid high housing prices in the urban centre.	• Approximately 565 people live in Fort McKay, of which 490, or 87%, are First Nations members. • The median age for the Aboriginal identity population in Fort McKay is 28.1. • The FMFN had approximately 778 members as of March 2013. A majority of these members live in and around Fort McKay. A number of members also live in Fort McMurray, Edmonton, and other locales outside the region. • Population changes in rural communities in Wood Buffalo relate mostly to community level demographic pressures, which include: a young population with a high birth rate relative to the population of Fort McMurray; and a mobile population with people leaving the community in search of education, training and employment opportunities, and returning to it, in part to avoid high housing prices in the urban centre.	• Approximately 35 Métis people live in Fort McKay, comprising 6% of the Aboriginal population. • The median age for the Aboriginal identity population in Fort McKay is 28.1. • Population changes in rural communities in Wood Buffalo relate mostly to community level demographic pressures, which include: a young population with a high birth rate relative to the population of Fort McMurray; and a mobile population with people leaving the community in search of education, training and employment opportunities, and returning to it, in part to avoid high housing prices in the urban centre.	• Approximately 392 of FMcFN members live on reserve or Crown land. • The median age for the Aboriginal identity population on select Wood Buffalo reserves is 34.1. • The FMcFN had approximately 688 members as of March 2013. Approximately 270 of FMcFN members live on reserve or Crown land. • Population changes in rural communities in Wood Buffalo relate mostly to community level demographic pressures, which include: a young population with a high birth rate relative to the population of Fort McMurray; and a mobile population with people leaving the community in search of education, training and employment opportunities, and returning to it, in part to avoid high housing prices in the urban centre.	• Some 4,800 Aboriginal persons (or over 70% of all Aboriginal persons in the study area) lived in the urban service area in 2011. Aboriginal persons made up approximately 8% of the resident population of Fort McMurray, as counted by the Statistics Canada 2011 National Household Survey. • The majority of Métis people in the area, over 2,000, live in Fort McMurray, comprising just under half of the Aboriginal population in the urban area. • The majority of FMcFN members (61%) live off-reserve, mainly in Fort McMurray. • Many members of the ACFN, MCFN, and FMFN also live in Fort McMurray. • The median age for the Aboriginal identity population in Fort McMurray is 26.6. A larger percentage of the Aboriginal identity population in Fort McMurray is of working age (15-64 years old) than in Fort McKay, Fort Chipewyan and on selected reserves. This is a potential indicator of the economic opportunities available in Fort McMurray and their draw for working-age Aboriginal people from other communities.

The analysis of the population effect does not allow for a distinction between the different First Nations and the other Aboriginal Groups. Population in the small communities of the RMWB will be influenced by housing availability and prices relative to the urban centre, employment opportunities, perceptions about the overall living environment, and other variables. The RMWB estimates are in line with but at the high end of the 1.1% to 2.2% average annual growth rate estimated by Statistics Canada for the Aboriginal Identity population (Statistics Canada 2011).

4.2 Wage Economy

4.2.1 Situation Analysis

4.2.1.1 Introduction

Over time, Aboriginal people have moved from a largely subsistence economy, dependent upon hunting, fishing and plant gathering, to a more mixed economy, combining seasonal work with hunting and traditional pursuits.

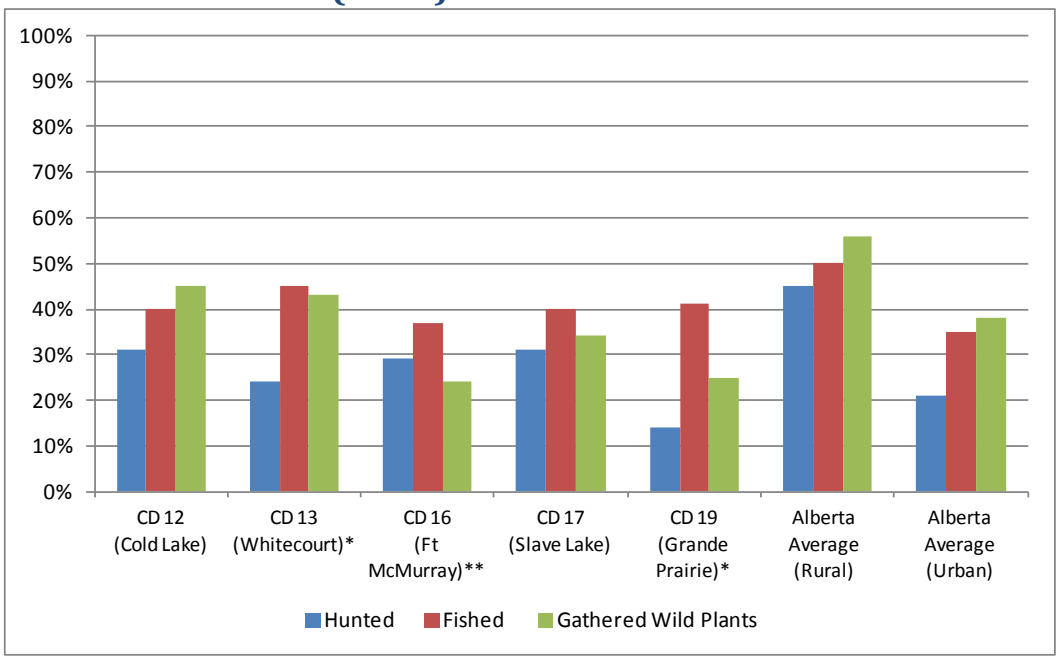
Today, a number of Aboriginal people in the region have become reliant on wage economy participation and some no longer engage in traditional activities on a regular basis, as illustrated in Figure 4.1. Among respondents to the Aboriginal Peoples Survey (APS), the levels of participation in traditional activities in the region are below the Alberta rural average but largely comparable to participation among Aboriginal peoples in other regions.

The following section provides information on:

- labour force indicators for the Aboriginal identity population,
- issues with accessing wage employment opportunities,
- an overview of key Aboriginal businesses in the area,
- income levels for the Aboriginal identity population, and
- the cost of living in the region.

Table 4.4 provides a summary of information by individual Aboriginal group, to the extent possible.

Figure 4.1 Off-Reserve Aboriginal Identity Population that Participated in Harvesting Activities in the Past 12 Months (2006)



Source: Statistics Canada, Aboriginal Peoples Survey (APS,2006).
Notes: Aboriginal identity population 15 years of age and older
CD = Census Division, (municipality) = largest municipality within the Census Division.
* = Data related to "Hunted" is labeled as "use with caution" by Statistics Canada.
** = Data related to "Gathered Wild Plants" is labeled as "use with caution" by Statistics Canada.

4.2.1.2 Labour Force Indicators

The regional economy has expanded significantly in recent years as a result of growth in the oil sands industry. As an example, construction and sustaining capital expenditures in the province's oil sands industry increased from $1.5 billion in 1998 to over $18 billion in 2008.

Many of these employment opportunities have been realized by local workers and businesses, including Aboriginal peoples and companies. Table 4.3 provides labour force data for the Aboriginal identity population 15 years of age and over in Fort McMurray and for comparison purposes, in other urban communities in Alberta.

Table 4.3 Labour Force Indicators for the Aboriginal Identity Population 15 Years of Age and Over (2011): Urban Communities

Labour Force Indicators	Fort McMurray	Grande Prairie	Edmonton	Calgary	Medicine Hat	Provincial Average
Participation rate (%)	77.0	74.0	66.8	75.1	63.3	64.9
Employment rate (%)	70.5	65.3	57.9	66.7	57.7	56.8
Unemployment rate (%)	8.4	11.6	13.4	11.1	8.9	12.6

Source: Statistics Canada. 2013. 2011 National Household Survey.

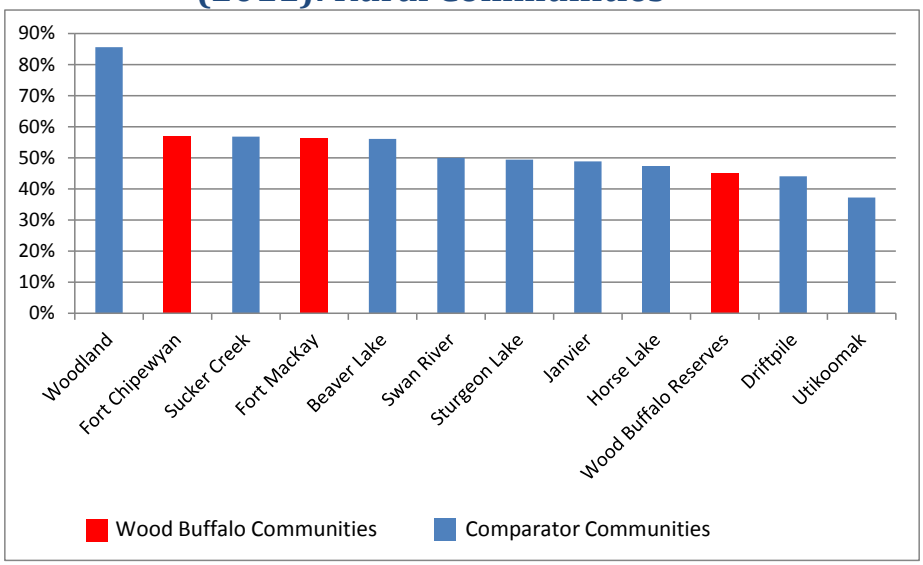
Labour force data for the Aboriginal identity population in Fort McMurray shows that:

- labour force participation is 77%, higher than for the Aboriginal identity population in many other major urban centres in Alberta; and
- the unemployment rate is 8.4%, lower than in many other major urban centres in Alberta.

Figures 4.2 and 4.3 provide a comparison of labour force indicators for the Aboriginal identity population in rural communities and reserves near or north of Fort McMurray to many other Treaty 8 communities in Alberta. This data shows that:

- labour force participation rates for Fort McKay and Fort Chipewyan are 56% and 57%, higher than many other Treaty 8 communities in Alberta;
- the labour force participation rate on Wood Buffalo reserves is 45%, comparable to or lower than many other Treaty 8 communities in Alberta;
- unemployment rates for Fort McKay, Fort Chipewyan and on Wood Buffalo reserves range from 7% to 24%, comparable to or lower than many other Treaty 8 communities in Alberta.

Figure 4.2 Labour Force Participation Rate for the Aboriginal Identity Population 15 Years of Age and Over (2011): Rural Communities

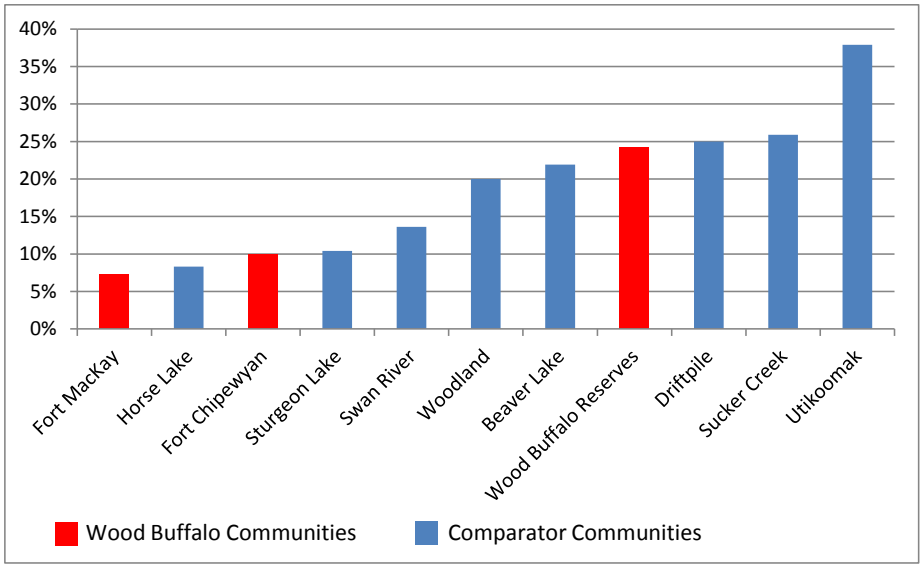


Source: Statistics Canada. 2013. 2011 National Household Survey.

Note: 1) Wood Buffalo Reserves includes the reserve communities of the MCFN, ACFN, and Fort McMurray First Nation.

2) Comparable data currently not available for the following communities: Dene Tha', Little Red River, and Bigstone.

Figure 4.3 Unemployment Rates for the Aboriginal Identity Population 15 Years of Age and Over (2011): Rural Communities



Source: Statistics Canada. 2013. 2011 National Household Survey.

Notes: 1) Wood Buffalo Reserves includes the reserve communities of the MCFN, ACFN, and Fort McMurray First Nation.

2) Comparable data currently not available for the following communities: Dene Tha', Little Red River, and Bigstone.

3) According to 2011 National Household Survey results, Janvier has an unemployment rate of 0%.

In Fort McKay, a number of nearby oil sands operators are offering local Aboriginal workers opportunities for wage employment while continuing to live in their home community.

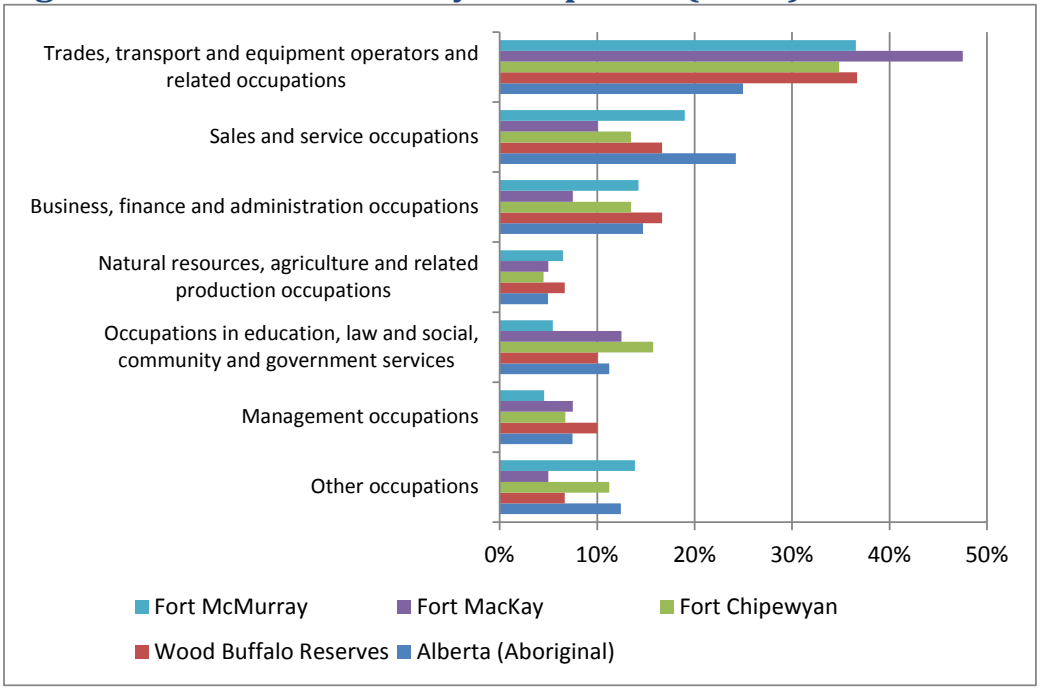
In Fort Chipewyan, a number of companies, including Syncrude, Suncor, Imperial Oil, and Shell are offering fly-in/fly-out (FIFO) options. According to Sonny Flett, former President of the Fort Chipewyan Métis Local, Syncrude's fly-in rotational program, "*is very beneficial because people are able to still maintain contact with their family and uphold a traditional lifestyle*." (CBSR 2005). Information submitted by ACFN during the recent Shell JME regulatory hearing notes that a FIFO option in Fort Chipewyan was identified as a potential benefit by a large majority of participants (MacDonald 2012).

In terms of the industries and occupations in which Aboriginal workers are employed, Figures 4.4 and 4.5 provide a breakdown for Fort McMurray and rural communities in the area, as well as the provincial average for the Aboriginal Identity population. As compared to the provincial average, this data shows that:

- a larger portion of the Aboriginal labour force on Wood Buffalo reserves and in Fort McKay, Fort McMurray and Fort Chipewyan are classified as being engaged in trades, transport, equipment operators and related occupations (35% to 48%); and

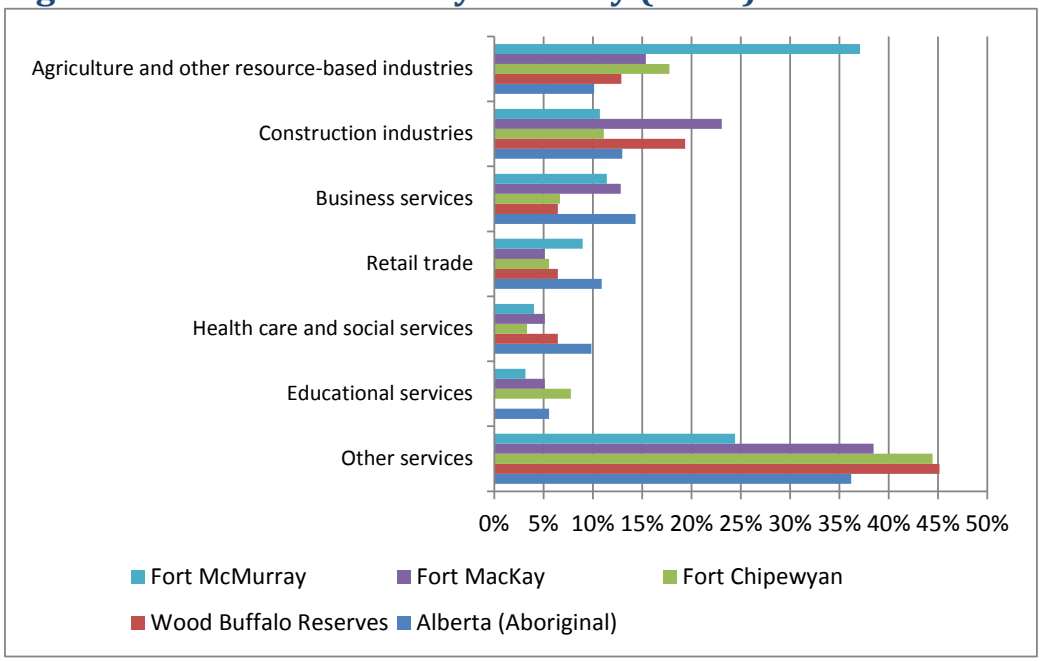
- a larger proportion of the labour force on Wood Buffalo reserves and in Fort McKay, Fort McMurray and Fort Chipewyan are engaged in the agriculture and other resource-based industries (i.e., the oil sands industry). A particularly large portion of the Aboriginal labour force in Fort McMurray, 37%, is engaged in this industry.

Figure 4.4 Labour Force by Occupation (2011)



Source: Statistics Canada. 2013. 2011 National Household Survey.
Notes:
Wood Buffalo Reserves includes the reserve communities of the MCFN, ACFN, and FMcFN.
Other occupations refers to: natural and applied sciences and related occupations; health occupations; occupation in arts, culture, recreation and sport; and occupations unique to processing, manufacturing and utility.

Figure 4.5 Labour Force by Industry (2011)



Source: Statistics Canada. 2013. 2011 National Household Survey.
Notes: 1) Wood Buffalo Reserves includes the reserve communities of the MCFN, ACFN, and FMcFN.
2) Other services refers to: manufacturing industries; wholesale trade; finance and real estate; and other services such as personal care services, repair services, funeral services, and laundry services.

4.2.1.3 Accessing Wage Employment Opportunities

Although labour force indicators for the Aboriginal identity population in the region compare favourably to Aboriginal peoples in other communities, they still lag behind the non-Aboriginal population. The relatively higher unemployment rates among Aboriginal people in the region indicates that some who want to work face challenges in finding it.

A labour pool study conducted by the Athabasca Tribal Council (ATC) in 2006 pointed to four primary barriers to employment:

- lack of education, with almost 75% of respondents having left before completing high school;
- lack of transportation in general and a lack of a driver's license in particular:
  - with 47% of all respondents indicating they do not have a driver's license; and
  - 95% of those respondents with grade 12 or less education indicating they do not have a driver's license;
- lack of employability skills/training, with safety and driver training being the key needs; and

- inability to pass drug/alcohol tests, with 26% of all respondents noting that they face this barrier.

Finally, the ATC study indicated a high degree of desire among respondents to upgrade skills. Many of those not in the labour force were enrolled in academic upgrading or training programs and 59% of employed respondents and 85% of the unemployed respondents indicated a willingness to upgrade. The relatively fewer local training opportunities available in smaller communities, and the costs associated with accessing training in Fort McMurray, have been noted as barriers by some Aboriginal residents (MacDonald 2012).

Some First Nations offer their members employment services. The MCFN, for example, offers its members job referral services, resume writing and employment coaching (MCFN 2009e). Fort McKay's employment and training office offers the Steps Forward program which provides career and education counseling for community members (FMFN 2012c). The ACFN Business Group also offers educational leave for its employees and provides training funding in certain cases (MacDonald 2012).

Support for employment services and training programs for Aboriginal peoples in the area comes through a variety of sources including the Aboriginal group itself, the federal and provincial governments, as well as industry. Generally, fewer employment and training supports are available to Métis in the area, as compared to First Nation members.

Aboriginal groups in the region have expressed a desire for:

- more inclusive and culturally-sensitive workplaces;
- more flexible wage employment arrangements that would offer their members opportunities to continue practicing traditional activities (e.g., more flexible work rotations);
- shift rotations that are more compatible with family and community life (e.g., a one week on, one week off schedule for those on FIFO work arrangements);
- opportunities to upskill and improve their chances for advancement within a specific industry or occupation;
- more flexibility in tailoring industry-funded training to the specific education and employment needs of community members; and
- opportunities to incorporate traditional knowledge into their wage employment opportunities (e.g., the Building Environmental Aboriginal Human Resources (BEAHR) program in Fort Chipewyan).

4.2.1.4 Aboriginal Businesses

A number of Aboriginal groups in the region operate business ventures that act as contractors and suppliers either directly or indirectly for oil sands development. Wood Buffalo Aboriginal companies performed over $1.3 billion in contract work with OSDG member companies in 2010. Between 1998 and 2010, Aboriginal companies earned over $5 billion in revenue (OSDG 2011). The opportunity for locally-owned Aboriginal businesses to bid and work on oil sands-related development is supported by a number of impact and benefit agreements that First Nations have with industrial proponents in the region. Aboriginal business ventures in the region include:

- The Fort McKay Group of Companies, a multi-million dollar organization fully owned and controlled by the FMFN. It employs over 800 FMFN and other First Nations members and non-Aboriginal persons who provide services in heavy equipment operation, bulk fuel and lube delivery, warehouse logistics, road and grounds maintenance, environmental services and land leasing operations. In 2010 the Group of Companies was able to invest approximately $18 million back into the community via wages, benefits, business support, community funding, donations and sponsorship (FMGOC 2012, FMGOC 2010a, FMGOC 2010b). Along with the Fort McKay Group of Companies, the FMFN has entered into several joint ventures with other existing corporations to provide services, including remote camp services and related support assistance (FMFN 2012).

- The ACFN Business Group, whose mission statement is to create “gainful and meaningful employment for the members of the Athabasca Chipewyan First Nation by establishing effective and profitable businesses.” The group currently employs roughly 1,250 ACFN and other First Nations members and non-Aboriginal persons across 13 wholly-owned businesses and joint ventures. Among the services provided are waste management and recycling, heavy and light duty maintenance services, logistics, road building and earthworks, and steel fabrication and installation. Company revenues were estimated at $225 million in 2011/12 (CBJ 2011, ACFNBG 2011, MacDonald 2012).

- The Mikisew Cree Group of Companies, which is owned and controlled by the MCFN, offers employment and business opportunities to its membership. It employs approximately 600 MCFN and other First Nations members and non-Aboriginal persons, and is comprised of seven Mikisew-owned companies and three joint ventures. The Group of Companies’ flagship, Mikisew Energy Services, is a “major participant in the resource development sector for the oil and gas, mining, and forestry industries” and provides a “full range of maintenance related services” (MES 2012, MGOC 2012, IC 2012).

- The Fort McKay Métis Group Ltd., a social enterprise owned and operated by the Fort McKay Métis Community. The Fort McKay Métis Group Ltd. has a fleet of mini-buses to transport workers to and from industrial sites in the region, as well as dump trucks, front-end loaders, excavators, and skid-steer loaders that can be used to support maintenance, reclamation and civil construction projects. As a social enterprise, profits generated by the business are reinvested in the community (FMM 2012).

- The Fort Chipewyan Métis Group of Companies. The first company in the Fort Chipewyan Métis Local 125's group of companies is Triple K Oil Field Services, which specializes in long-distance water pumping with insulated line (FCM 2012).

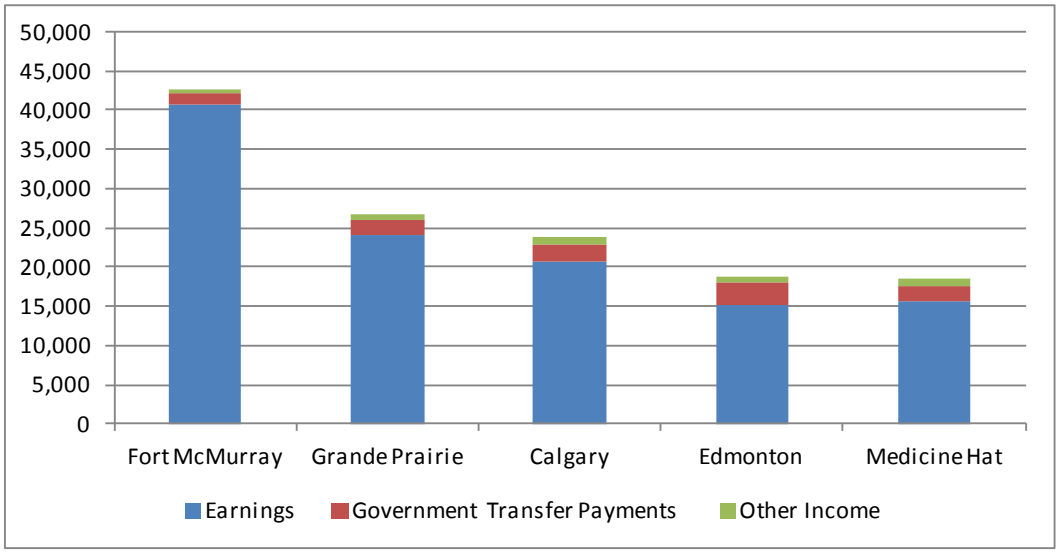
- The Infinity Métis Corporation**,** a business arm of the Métis Local 1935 (Fort McMurray) runs a camp catering business.

Local Aboriginal businesses, particularly small or start-up enterprises, do face some challenges including limited financial and operational capacities, lack of experience, and skilled workforce shortages. While large oil sands companies drive economic activity, they also compete for local workers, often making it difficult for other companies, especially small businesses, to attract and retain staff. The need to support small Aboriginal businesses and entrepreneurs has been raised by Aboriginal groups in the area. In 2009, the FMFN, in a joint venture with Suncor Energy, established the Fort McKay Business Incubator to provide local entrepreneurs with support in developing their businesses (e.g., business planning, startup activities).

4.2.1.5 Income

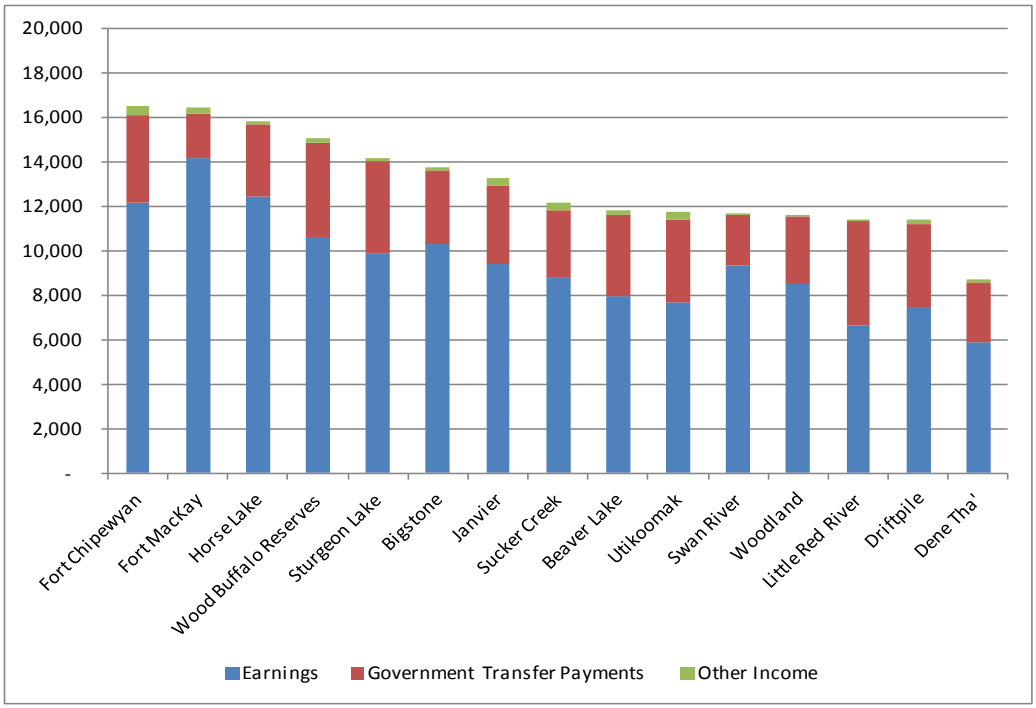
Strong economic growth in the region is reflected in the personal incomes of Aboriginal peoples in the region, as shown in Figures 4.6 and 4.7. Median incomes for the Aboriginal identity population in the region, whether in the urban centre, rural communities, or reserves are higher than for Aboriginal peoples in comparable communities in Alberta. In Fort McMurray, the median income of the Aboriginal identity population ($42,564) is comparable to the median income of the non-Aboriginal population ($43,920). These higher incomes are the result of higher earnings, largely driven by economic activity related to oil sands development.

Figure 4.6 Median Income for the Aboriginal Identity Population 15 Years of Age and Over (2006): Urban Communities



Source: Statistics Canada. 2007. 2006 Aboriginal Population Profile. 2006 Census.
Note: 2006 is the latest year for which data is available.
Note: Wood Buffalo Reserves includes the reserve communities of the MCFN, ACFN, and FMcFN.

Figure 4.7 Median Income for the Aboriginal Identity Population 15 Years of Age and Over (2006): Rural Communities



Source: Statistics Canada. 2007. 2006 Aboriginal Population Profile. 2006 Census.
Note: 2006 is the latest year for which data is available.
Note: Wood Buffalo Reserves includes the reserve communities of the MCFN, ACFN, and FMcFN.

The income effects do not accrue equally to all community members. Those with education, employment, and stronger support systems will likely cope better with, and obtain more benefits from, change. Indeed, there is greater income disparity in the region as compared to the provincial average. In 2010, the median family income for couple families in Fort McKay and Fort Chipewyan was 3.8 and 2.6 times higher, respectively, than for lone-parent families, while in Fort McMurray it was 2.8 times higher. The corresponding provincial average was 2.3 (StatsCan 2012). Between 2006 and 2010, the income disparity between couple and lone-parent families increased by 5% in Fort Chipewyan and 11% in Fort McKay, as compared to 2% provincially (StatsCan 2008, 2012). A high level of income inequality within a community has the potential of reducing social cohesion.

Increased income may also contribute to negative behaviours, including increased alcohol, drug abuse, and gambling, for individuals that lack the life skills and financial experience to deal with increased income.

4.2.1.6 Cost of Living

Income levels should be placed within the context of the cost of living. According to Alberta's Place-to-Place Price Comparison Survey, housing costs in Fort McMurray are 39% higher than in Edmonton. The cost of food products is between 5% and 10% higher in Fort McMurray than in Edmonton (AFE 2010).

In small communities, housing costs are generally lower than in Fort McMurray, but food prices are higher. The price of food, fuel and other necessities is a concern especially in Fort Chipewyan, where in 2006 food retail prices were found to be 120% higher than in Fort McMurray (Larcombe 2012). The higher food costs are largely related to Fort Chipewyan's remote location – the community has no all-weather road access to the rest of the province – and the associated higher freight costs.

Food and fuel prices are a widespread concern for many rural northern communities across Canada and are related to their small market size and isolation. For example, results from northern Manitoba for the First Nations Food, Nutrition and Environment Study (FNFNES) found that food prices were, on average, 126% higher than in Winnipeg (Chan et al., 2012).

4.2.2 Effects Assessment

4.2.2.1 Project Effects

Shell's PRM project will provide additional employment and business opportunities for local Aboriginal peoples and businesses, thus offering prospects for continued improvements in income. Construction of the Project will require approximately 17,800 person-years of on-site employment, while operations will create 1,380 direct

permanent jobs. Due to the tight regional labour market, most of these jobs are expected to accrue to people from outside the region. However, Shell is committed to working with the IRCs and employment coordinators to identify and remove barriers to employment for local Aboriginal workers, wherever possible. Shell has set the goal of increasing Aboriginal participation in its workforce and has supported a number of initiatives and programs over the years to assist Aboriginal businesses and workers in tackling barriers to contracting and employment opportunities, including:

- employing a full-time Aboriginal Business Advisor, who facilitates Aboriginal employment and contracting opportunities with Shell;
- working with the Northeastern Alberta Aboriginal Business Association;
- supporting Aboriginal scholarships through contributions to the National Aboriginal Achievement Foundation and supporting environmental education of Aboriginal students in the region;
- donating $250,000 to Fort McKay's Steps Forward educational program;
- delivering drilling rig and driver training in Fort Chipewyan;
- supporting a Diverse Recruiter in Calgary, an Aboriginal Recruiter at Albian Sands, and an Aboriginal Business consultant; and
- sponsoring delivery of the Building Environmental Aboriginal Human Resources (BEAHR) program in Fort Chipewyan.

Shell also recently instituted a fly-in/fly-out (FIFO) program for employees residing in Fort Chipewyan. As of mid-2013, approximately a dozen workers were making use of this FIFO option and Shell is looking to further increase this number. Operations-related workers using FIFO engage in a one-week-on and one-week-off shift rotation.

The analysis of the Project employment effect does not allow for a distinction between the different First Nations and the other Aboriginal groups. Aboriginal employment participation is determined through a process of self-identification which is managed by Shell's human resources department. The 2010 Shell employee self-identification survey showed that 111 Shell Albian Sands (SAS) employees are of Aboriginal descent, which represents 6.8% of the workforce at SAS. It is unlawful to disclose further personal information including but not limited to: employee occupations, ancestry or Band affiliation. In addition, the commercial nature of the relationship between the Project and Aboriginal businesses implies confidentiality.

Along with direct hires, Shell also endeavours to use local contractor services where appropriate. As of June 2011, Shell had spent over $1 billion on services provided by Aboriginal contractors working on the Athabasca Oil Sands Project, which includes the Jackpine Mine (Shell 2011). This involved working with over 70 Aboriginal businesses providing a range of goods and services such as facilities management, technical expertise, bussing, camps and catering, and waste management for Shell projects (CEAA 2012).

4.2.2.2 Future Development

Current and planned development in the oil sands industry will expand available employment and business opportunities. Low unemployment rates among the non-Aboriginal population in the region mean that many of these opportunities will be filled by workers who currently reside outside the region.

However, a number of industrial proponents, including Shell, have identified local Aboriginal hiring and business development as important to their operations. Local Aboriginal workers and businesses have benefited from past employment and business opportunities, and they will have an opportunity to benefit from future prospects as well. The degree to which they can take advantage of, and maximize the value from, these opportunities will depend on:

- supports available to assist the unemployed to overcome barriers to employment (e.g., education, transportation);
- opportunities for Aboriginal workers to improve their skill sets and move into higher skilled, higher paying jobs; and
- working conditions and work practices that accommodate cultural diversity and promote inclusion (e.g., flexible work arrangements that would allow Aboriginal workers to take part in traditional activities).

As a means of recruiting additional local Aboriginal workers to work on oil sands projects, a number of developers, including Shell, have also initiated programs which provide transportation for workers in Fort McKay and Fort Chipewyan to commute to work sites in the region (e.g., bussing, fly-in/fly-out). These programs allow workers to remain connected to their home communities while pursuing wage employment opportunities in the region.

Table 4.4 Summary of Issues by Aboriginal Group: Wage Economy

All Groups	ACFN Members on Reserve and in Fort Chipewyan	MCFN Members on Reserve and in Fort Chipewyan	Métis Members in Fort Chipewyan	FMFN Members in Fort McKay	Métis Members in Fort McKay	FMcFN Members on Reserve	FMcFN and Other Aboriginal Group Members in Fort McMurray
• A number of Aboriginal people in the region have become reliant on wage economy participation and no longer engage in traditional activities on a regular basis. Among respondents to Statistics Canada's Aboriginal Peoples Survey (APS), the levels of participation in traditional activities in the region are below the Alberta rural average but largely comparable to participation among Aboriginal peoples in other regions. • Expansion of the regional economy in recent years has created employment and business opportunities for local workers and businesses, including Aboriginal peoples and companies. • The relatively heavy engagement of the Aboriginal labour force in the oil sands industry and trades, transport, equipment operators and related occupations is reflective of the overall regional labour force. • Although labour force indicators for the Aboriginal identity population in the region compare favourably to Aboriginal peoples in other communities, they still lag behind the non-Aboriginal population. • A labour pool study conducted by the Athabasca Tribal Council (ATC) in 2006 pointed to four primary barriers to employment: lack of education; lack of transportation; lack of employability skills/training; and inability to pass drug/alcohol tests. • Support for employment services and training programs for	• The Aboriginal identity population in Fort Chipewyan have a labour force participation rate of 57%, higher than many other Treaty 8 communities in Alberta. • The Aboriginal identity population on select Wood Buffalo Reserves have a labour force participation rate of 45%, comparable to or lower than many other Treaty 8 communities in Alberta. • The unemployment rates for the Aboriginal identity population in Fort Chipewyan and on select Wood Buffalo Reserves is 10% and 24%, respectively. This is comparable to or lower than many other Treaty 8 communities in Alberta. • In Fort Chipewyan, a number of companies, including Syncrude, Suncor, Imperial Oil, and Shell are offering fly-in/fly-out (FIFO) options. Information submitted by ACFN during the recent Shell JME regulatory hearing notes that a FIFO option in Fort Chipewyan was identified as a potential benefit by a large majority of participants. • A large portion of the labour force in Fort Chipewyan (35%) and on Wood Buffalo reserves (37%) are classified as being engaged in trades, transport, equipment operators and related occupations. • A larger proportion of the labour force in Fort Chipewyan (18%) and on Wood Buffalo reserves (13%) are engaged in the agriculture and other resource-based industries (i.e., the oil sands industry) as compared to the provincial average for the	• The Aboriginal identity population in Fort Chipewyan have a labour force participation rate of 57%, higher than many other Treaty 8 communities in Alberta. • The Aboriginal identity population on select Wood Buffalo Reserves have a labour force participation rate of 45%, comparable to or lower than many other Treaty 8 communities in Alberta. • The unemployment rates for the Aboriginal identity population in Fort Chipewyan and on select Wood Buffalo Reserves is 10% and 24%, respectively. This is comparable to or lower than many other Treaty 8 communities in Alberta. • In Fort Chipewyan, a number of companies, including Syncrude, Suncor, Imperial Oil, and Shell are offering fly-in/fly-out (FIFO) options. • A large portion of the labour force in Fort Chipewyan (35%) and on Wood Buffalo reserves (37%) are classified as being engaged in trades, transport, equipment operators and related occupations. • A larger proportion of the labour force in Fort Chipewyan (18%) and on Wood Buffalo reserves (13%) are engaged in the agriculture and other resource-based industries (i.e., the oil sands industry) as compared to the provincial average for the Aboriginal Identity population (10%). • The relatively fewer local training opportunities available in smaller communities, and the	• The Aboriginal identity population in Fort Chipewyan have a labour force participation rate of 57%, higher than many other Treaty 8 communities in Alberta. • The unemployment rate for the Aboriginal identity population in Fort Chipewyan is 10%, lower than many other Treaty 8 communities in Alberta. • In Fort Chipewyan, a number of companies, including Syncrude, Suncor, Imperial Oil, and Shell are offering fly-in/fly-out (FIFO) options. According to Sonny Flett, former President of the Fort Chipewyan Métis Local, Syncrude's current fly-in rotational program, "*is very beneficial because people are able to still maintain contact with their family and uphold a traditional lifestyle*." • A large portion of the labour force in Fort Chipewyan (35%) are classified as being engaged in trades, transport, equipment operators and related occupations. • A larger proportion of the labour force in Fort Chipewyan (18%) are engaged in the agriculture and other resource-based industries (i.e., the oil sands industry) as compared to the provincial average for the Aboriginal Identity population (10%). • The relatively fewer local training opportunities available in smaller communities, and the costs associated with accessing training in Fort McMurray, have been noted as	• The Aboriginal identity population in Fort McKay have a labour force participation rate of 56%, higher than many other Treaty 8 communities in Alberta. • The unemployment rate for the Aboriginal identity population in Fort McKay is 7%, lower than most other Treaty 8 communities in Alberta. • In Fort McKay, a number of nearby oil sands operators are offering local Aboriginal workers opportunities for wage employment while continuing to live in their home community. • A large proportion of the labour force in Fort McKay (48%) are classified as being engaged in trades, transport, equipment operators and related occupations. • A larger proportion of the labour force in Fort McKay (15%) are engaged in the agriculture and other resource-based industries (i.e., the oil sands industry) as compared to the provincial average for the Aboriginal Identity population (10%). • The relatively fewer local training opportunities available in smaller communities, and the costs associated with accessing training in Fort McMurray, have been noted as barriers. • Fort McKay's employment and training office offers the Steps Forward program which provides career and education counseling for community members. • The Fort McKay Group of Companies is a multi-million dollar organization fully owned and controlled by the FMFN. It provides services in heavy	• The Aboriginal identity population in Fort McKay have a labour force participation rate of 56%, higher than many other Treaty 8 communities in Alberta. • The unemployment rate for the Aboriginal identity population in Fort McKay is 7%, lower than most other Treaty 8 communities in Alberta. • In Fort McKay, a number of nearby oil sands operators are offering local Aboriginal workers opportunities for wage employment while continuing to live in their home community. • A large proportion of the labour force in Fort McKay (48%) are classified as being engaged in trades, transport, equipment operators and related occupations. • A larger proportion of the labour force in Fort Chipewyan (15%) are engaged in the agriculture and other resource-based industries (i.e., the oil sands industry) as compared to the provincial average for the Aboriginal Identity population (10%). • The relatively fewer local training opportunities available in smaller communities, and the costs associated with accessing training in Fort McMurray, have been noted as barriers. • Generally, fewer	• The Aboriginal identity population on select Wood Buffalo Reserves have a labour force participation rate of 45%, comparable to or lower than many other Treaty 8 communities in Alberta. • The unemployment rate for the Aboriginal identity population on select Wood Buffalo Reserves is 24%, comparable to many other Treaty 8 communities in Alberta. • A large portion of the labour force on Wood Buffalo reserves (37%) are classified as being engaged in trades, transport, equipment operators and related occupations. • A larger proportion of the labour force on Wood Buffalo reserves (13%) are engaged in the agriculture and other resource-based industries (i.e., the oil sands industry) as compared to the provincial average for the Aboriginal Identity population (10%). • The median income for the Aboriginal identity population on select Wood Buffalo reserves is higher than for Aboriginal peoples in most other Treaty 8 communities in Alberta. • In small communities, housing costs are	• Labour force participation for the Aboriginal identity population in Fort McMurray is 77%, higher than for the Aboriginal identity population in many other major urban centres in Alberta. • The unemployment rate for the Aboriginal identity population in Fort McMurray is 8.4%, lower than for the Aboriginal identity population in many other major urban centres in Alberta. • Attachment to the labour market of Aboriginal peoples in the region is highest in Fort McMurray. • A large portion of the labour force in Fort McMurray (37%) are classified as being engaged in trades, transport, equipment operators and related occupations. • A sizeable portion of the labour force in Fort McMurray (37%) are employed in agriculture and other resource-based industries (i.e., the oil sands industry). • The Infinity Métis Corporation, a business arm of the Métis Local 1935 (Fort McMurray) runs a camp catering business.

Table 4.4 Summary of Issues by Aboriginal Group: Wage Economy (continued)

All Groups	ACFN Members on Reserve and in Fort Chipewyan	MCFN Members on Reserve and in Fort Chipewyan	Métis Members in Fort Chipewyan	FMFN Members in Fort McKay	Métis Members in Fort McKay	FMcFN Members on Reserve	FMcFN and Other Aboriginal Group Members in Fort McMurray
Aboriginal peoples in the area comes through a variety of sources including the Aboriginal group itself, the federal and provincial governments, as well as industry. • Aboriginal groups in the region have expressed a desire for: more inclusive and culturally-sensitive workplaces; more flexible wage employment arrangements that would offer their members opportunities to continue practicing traditional activities (e.g., more flexible work rotations, seasonal employment); shift rotations that are more compatible with family and community life (e.g., a one week on, one week off schedule for those on FIFO work arrangements); opportunities to upskill and improve their advancement within a specific industry or occupation; and opportunities to incorporate traditional knowledge into their wage employment opportunities (e.g., the Building Environmental Aboriginal Human Resources (BEAHR) program in Fort Chipewyan). • A number of Aboriginal groups in the region operate business ventures that act as contractors and suppliers either directly or indirectly for oil sands development. Wood Buffalo Aboriginal companies performed over $1.3 billion in contract work with OSDG member companies in 2010. Between 1998 and 2010, Aboriginal companies earned over $5 billion in revenue (OSDG 2011). The opportunity for locally-owned Aboriginal businesses to bid and work on oil sands-related development is supported by a number of impact and benefit agreements that First	Aboriginal Identity population (10%). • The relatively fewer local training opportunities available in smaller communities, and the costs associated with accessing training in Fort McMurray, have been noted as barriers. • The ACFN Business Group offers educational leave for its employees and provides training funding in certain cases. • The ACFN Business Group employs roughly 1,250 ACFN and other First Nations members and non-Aboriginal persons across 13 wholly-owned businesses and joint ventures. Among the services provided are waste management and recycling, heavy and light duty maintenance services, logistics, road building and earthworks, and steel fabrication and installation. Company revenues were estimated at $225 million in 2011/12. • Median incomes for the Aboriginal identity population in Fort Chipewyan and on Wood Buffalo Reserves are higher than for Aboriginal peoples in most other Treaty 8 communities in Alberta. • In 2010, the median family income for couple families in Fort Chipewyan was 2.6 times higher than for lone-parent families. The corresponding provincial average was 2.3. Between 2006 and 2010, the income disparity between couple and lone-parent families increased by 5% in Fort Chipewyan, as compared to 2% provincially. • The price of food, fuel and other necessities is a concern in Fort Chipewyan, where in 2006 food	costs associated with accessing training in Fort McMurray, have been noted as barriers. • The MCFN offers its members job referral services, resume writing and employment coaching. • The Mikisew Cree Group of Companies, which is owned and controlled by the MCFN, employs approximately 600 MCFN and other First Nations members and non-Aboriginal persons. The Group of Companies' flagship, Mikisew Energy Services, is a "major participant in the resource development sector for the oil and gas, mining, and forestry industries" and provides a "full range of maintenance related services." • Median incomes for the Aboriginal identity population in Fort Chipewyan and on Wood Buffalo Reserves are higher than for Aboriginal peoples in most other Treaty 8 communities in Alberta. • In 2010, the median family income for couple families in Fort Chipewyan was 2.6 times higher than for lone-parent families. The corresponding provincial average was 2.3. Between 2006 and 2010, the income disparity between couple and lone-parent families increased by 5% in Fort Chipewyan, as compared to 2% provincially. • The price of food, fuel and other necessities is a concern in Fort Chipewyan, where in 2006 food retail prices were found to be 120% higher than in Fort McMurray. The higher food costs are largely related to Fort	barriers. • Generally, fewer employment and training supports are available to Métis in the area, as compared to First Nation members. • Triple K Oil Field Services, which specializes in long-distance water pumping with insulated line, is the first company in the Fort Chipewyan Métis Local 125's group of companies. • Median incomes for the Aboriginal identity population in Fort Chipewyan are higher than for Aboriginal peoples in other Treaty 8 communities in Alberta. • In 2010, the median family income for couple families in Fort Chipewyan was 2.6 times higher than for lone-parent families. The corresponding provincial average was 2.3. 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Along with the Fort McKay Group of Companies, the FMFN has entered into several joint ventures with other existing corporations to provide services, including remote camp services and related support assistance. • In 2009, the FMFN, in a joint venture with Suncor Energy, established the Fort McKay Business Incubator to provide local entrepreneurs with support in developing their businesses (e.g., business planning, startup activities). • The median income for the Aboriginal identity population in Fort McKay is higher than for Aboriginal peoples in most other Treaty 8 communities in Alberta. • In 2010, the median family income for couple families in Fort McKay was 3.8 times higher than for lone-parent families. The corresponding provincial average was 2.3. 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The Fort McKay Métis Group Ltd. has a fleet of mini-buses to transport workers to and from industrial sites in the region, as well as dump trucks, front-end loaders, excavators, and skid-steer loaders. • The median income for the Aboriginal identity population in Fort McKay is higher than for Aboriginal peoples in most other Treaty 8 communities in Alberta. • In 2010, the median family income for couple families in Fort McKay was 3.8 times higher than for lone-parent families. The corresponding provincial average was 2.3. Between 2006 and 2010, the income disparity between couple and lone-parent families increased by 11% in Fort McKay, as compared to 2% provincially. • In small communities, housing costs are generally lower than in Fort McMurray, but food prices	generally lower than in Fort McMurray, but food prices are higher.	• In Fort McMurray, the median income of the Aboriginal identity population ($42,564) is comparable to the median income of the non-Aboriginal population ($43,920). • In 2010, the median family income for couple families in in Fort McMurray was 2.8 times higher than for lone-parent families. The corresponding provincial average was 2.3. • According to Alberta's Place-to-Place Price Comparison Survey, housing costs in Fort McMurray are 39% higher than in Edmonton. The cost of food products is between 5% and 10% higher in Fort McMurray than in Edmonton.

Table 4.4 Summary of Issues by Aboriginal Group: Wage Economy (continued)

All Groups	ACFN Members on Reserve and in Fort Chipewyan	MCFN Members on Reserve and in Fort Chipewyan	Métis Members in Fort Chipewyan	FMFN Members in Fort McKay	Métis Members in Fort McKay	FMcFN Members on Reserve	FMcFN and Other Aboriginal Group Members in Fort McMurray
Nations have with industrial proponents in the region. • Local Aboriginal businesses, particularly small or start-up enterprises, do face some challenges including limited financial and operational capacities, lack of experience, and skilled workforce shortages. The need to support small Aboriginal businesses and entrepreneurs has been raised by Aboriginal groups in the area. While large oil sands companies drive economic activity, they also compete for local workers, often making it difficult for other companies, especially small businesses, to attract and retain staff. • Median incomes for the Aboriginal identity population in the region, whether in the urban centre, rural communities, or reserves are higher than for Aboriginal peoples in comparable communities in Alberta. These higher incomes are the result of higher earnings, largely driven by economic activity related to oil sands development. • Income effects do not accrue equally to all community members. Indeed, there is greater income disparity in the region as compared to the provincial average. A high level of income inequality within a community has the potential of reducing social cohesion.	retail prices were found to be 120% higher than in Fort McMurray. The higher food costs are largely related to Fort Chipewyan's remote location – the community has no all-weather road access to the rest of the province – and the associated higher freight costs.	Chipewyan's remote location – the community has no all-weather road access to the rest of the province – and the associated higher freight costs.			are higher.		

4.3 Health and Well-Being

4.3.1 Situation Analysis

4.3.1.1 Introduction

The following section provides information on:

- health status indicators for the Aboriginal identity population in the study area,
- concerns raised by Aboriginal groups in regards to the health effects caused by environmental changes brought about by oil sands development,
- social issues and concerns raised by Aboriginal groups in the region,
- a discussion on the broader socio-economic determinants of health, and
- an overview of current health and social services in the region, as well as service delivery issues.

Table 4.7 provides a summary of information by individual Aboriginal group, to the extent possible.

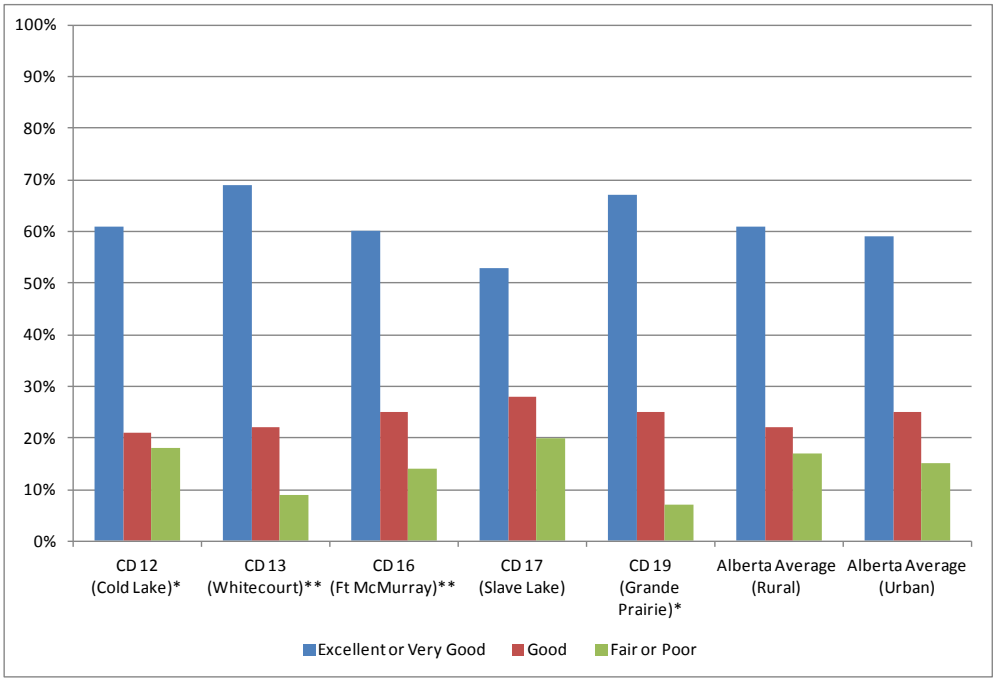
4.3.1.2 Health Status

Health status indicators for Aboriginal people are often lacking or incomplete as compared to indicators for the whole population. Based on what data is available from Health Canada and Alberta Health and Wellness, Aboriginal people trail the non-Aboriginal population for most health indicators. Specifically, the Aboriginal population has poorer health indicators with regards to infant mortality, life expectancy, suicide rates, rates of diabetes, sexually transmitted infections rates, rates of obesity, rates for chronic diseases, and others (FNIH 2010b, Health Canada 2011, AHW 2012).

Although little health data is publicly available for Aboriginal groups in the Study Area, concerns have been raised by Aboriginal groups in the area in regards to a number of these same health issues. Discussions with Alberta Health Services indicate that rates of diabetes, smoking, drinking, sexually transmitted infections, and drug use are higher among the Aboriginal peoples in the region.

Figures 4.8 and 4.9 provide some survey data for the off-reserve Aboriginal identity population in the region with respect to self-reported health status and self-reported chronic health conditions, as compared to other regions in Alberta. No comparable survey of the on-reserve population in the region is available.

Figure 4.8 Self-Reported Health Status among the Off-Reserve Aboriginal Identity Population (2006)



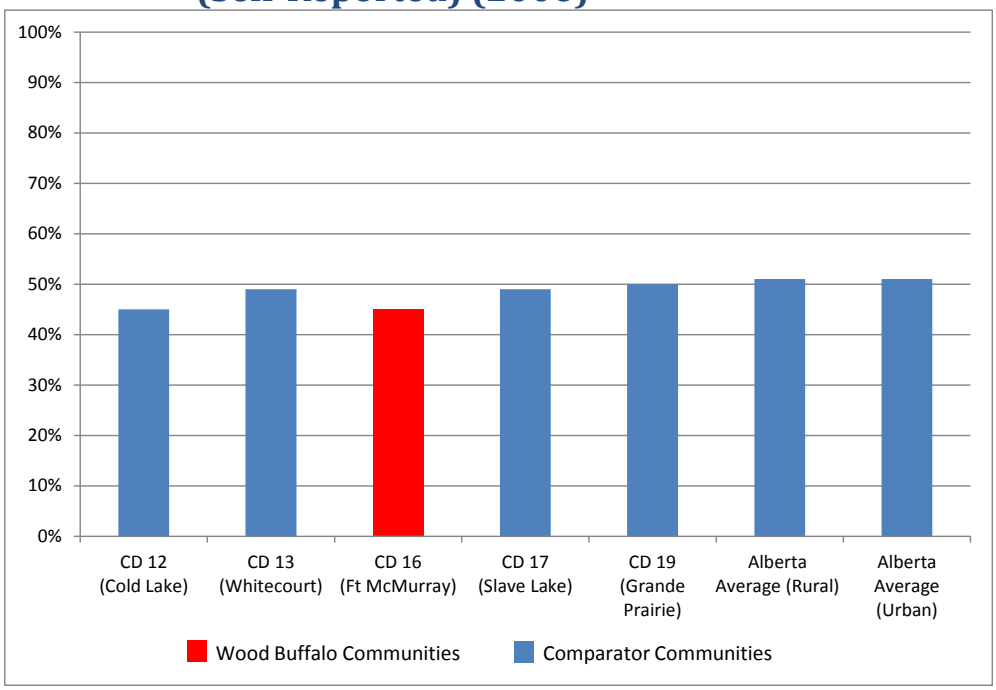
Source: Statistics Canada, Aboriginal People's Survey (APS,2006).

Notes: Aboriginal identity population 15 years of age and older.
2006 is the latest year for which data is available.
CD = Census Division, (municipality) = largest municipality within the respective Census Division.

* Data related to "Fair or Poor" is labeled as "use with caution" by Statistics Canada.

** Data related to "Good" and "Fair or Poor" is labeled as "use with caution" by Statistics Canada

Figure 4.9 Off-Reserve Aboriginal Identity Population With One or More Chronic Health Conditions (Self-Reported) (2006)



Source: Statistics Canada, Aboriginal People's Survey (APS,2006)
Notes: Aboriginal identity population 15 years of age and older.
2006 is the latest year for which data is available.
CD = Census Division, (municipality) = largest municipality within the Census Division.
This is self-reported data and should be interpreted with caution.

Based on this survey data:

- Approximately 85% of Aboriginal identity respondents in the region reported their health as good, very good or excellent. This is comparable to Aboriginal identity respondents in other regions and to the rural and urban provincial averages.

- Approximately 45% of Aboriginal identity respondents in the region reported that they had one or more chronic health conditions. This is somewhat lower than Aboriginal identity respondents in other regions and the rural and urban provincial averages.

Aboriginal groups in the area have raised a number of concerns in regards to the health effects caused by environmental changes brought about by oil sands development. Concerns about the impact of oil sands development upon individual and community health were the most prevalent of all social issues, according to supplementary information filed by the Athabasca Chipewyan First Nation during the recent JME

regulatory process (MacDonald 2012). Aboriginal groups have raised concerns with respect to such things as:

- air quality (e.g., dust, odours);
- water quality (e.g., potential contamination); and
- quality of country foods and other resources (e.g., medicinal and food plants, fish, waterfowl, and wild game) (MacDonald 2012, FMIRC 2010, Treefrog 2007 cited in Orenstein et al. 2013).

Cancer rates have been an especially important issue to Aboriginal groups in Fort Chipewyan. The filed application presents a health risk assessment, which addresses the human health risks associated with oil sands industry emissions.

Aboriginal groups have also identified several indirect health concerns caused by environmental changes brought about by oil sands development, including:

- mental health concerns, resulting from:
    - increased stress and anxiety among community members concerned with the potential environmental effects and the potential for related human health effects;
    - a feeling of dislocation from the land and traditional culture as a result of reduced engagement in harvesting activities; and
- physical health concerns, such as the potential for reduced physical activity and an increased reliance on store-bought food as a result of reduced engagement in harvesting activities (MacDonald 2012, FMIRC 2010, AFN 2007).

To address health-related community concerns in Fort McKay and Fort Chipewyan, the provincial government is planning a three-year community health assessment, to be conducted by a research team from the University of Calgary. The study is expected to involve Fort McKay First Nation, Athabasca Chipewyan First Nation, Fort McKay Métis, and the Nunee Health Authority. It is expected that the research team and community members will work together to develop the study approach and identify health priorities. The Mikisew Cree First Nation, however, has indicated that they will not take part in the study because of concerns over the study's focus (i.e., cancer rates relative to other health issues), the level of community involvement, and ownership of the data (NP 2013).

4.3.1.3 Social Issues

General

Aboriginal communities in the region have raised concerns with respect to a number of social issues in recent years, including:

- The availability and abuse of alcohol, illicit drugs and prescription pills. This has been raised consistently by all Aboriginal groups as a serious concern. As the region has developed, exposure and access to alcohol and drugs has also increased, both in the urban service centre and small rural Aboriginal communities. Alcohol and drug addiction is a concern Aboriginal groups in the region share with Aboriginal groups across the country. Respondents to the First Nations Regional Health Survey, a national survey of First Nations on-reserve and northern First Nations communities, ranked alcohol and drugs as the top challenge facing their respective communities (FNIGC 2011).

- Stresses being placed on families dealing with alcohol and drug abuse issues. These stresses contribute to concerns that youth might not be receiving adequate direction and support.

- Care and support for elders who face a relatively high cost of living with few financial means. As the generation most closely tied to traditional culture and practices, they face added stress resulting from cultural change taking place in the community.

The Wage Economy

Increased wage economy participation can have negative social effects for many Aboriginal communities and their members, including:

- Increased social and family stressors. Work commitments, especially for those needing to be away from their home community for extended periods in order to access employment, can decrease the quantity of time available to spend with family.

- Negative behavioural changes among some community members. Increased income, especially among those lacking financial experience, might drive increased alcohol and drug abuse, and gambling.

- Increased income disparity within the community (Section 4.2.1.4). Income disparity between those engaged in the wage economy, especially relatively higher-paying oil sands industry work, and those who are engaged in lower pay work or simply not engaged in wage employment at all, can contribute to

increased social stratification within Aboriginal communities, affecting existing social relationships and values.

- Decreased community cohesion and a sense of transience associated with the movement of community members to and from larger centres, such as Fort McMurray. Moving to and from larger centres can increase social stressors for the individual moving as well as their family and the broader community.

- Increased mental stress and anxiety for some Aboriginal workers, as certain types of work in the oil sands industry are viewed by some as conflicting with traditional values and way of life. In addition, some Aboriginal workers can feel mental stress and anxiety as a result of experiencing workplace discrimination.

- Increased exposure to, and pressure to act according to, outside social values that might run contrary to traditional values. For example, Aboriginal community members have indicated that engagement in the wage economy places greater emphasis on the nuclear family as opposed to the extended family or broader community (MacDonald 2012, FMIRC 2010).

However, wage employment in the region can also drive positive social effects, including:

- An increased sense of self-worth and sense of control. This concept of self-reliance is more focused on individual effort and achievement as opposed to the more traditional concept that is focused more so on communal efforts and achievements (FMIRC 2010).

- Increased amenities and services. Job creation spurs population growth, which in turn drives enhanced and expanded local and regional infrastructure and services that residents can access (e.g., social, health, education, housing, recreation) (Appendix 2, Section 2).

- Opportunities to maintain social and family connections in smaller communities. Although some Aboriginal peoples migrate to Fort McMurray or elsewhere for employment, development in the region has provided an opportunity for some Aboriginal peoples to live in Fort McKay and Fort Chipewyan and access employment opportunities, either in close proximity to the community or through FIFO arrangements.

Summary

Many of these issues are shared with other Aboriginal peoples across Canada and have been brought about by external influences largely outside their control. Some of these issues have also been raised as concerns among the non-Aboriginal population in the region as well. Examples include:

- alcohol and drug use (e.g., rates of heavy drinking are higher in the former Northern Lights Health Region as compared to Canada and Alberta as a whole) (StatsCan 2009);
- work demands taking time away from family and community life; and
- reduced community cohesion and a sense of transience among residents.

Social conditions for Aboriginal peoples should also be placed within the larger context of past and current events. Past government policies of racism and social exclusion, including the legacy of residential schools, has created conditions of disadvantage for Aboriginal peoples (NCCAH 2009). Current experiences with racism and social exclusion can also create stressors and negatively impact social conditions as well as health outcomes.

4.3.1.4 Broader Health Determinants

With regards to broader socio-economic determinants of health – such as educational attainment levels, income levels, labour market attachment and housing conditions – information in other sections of this report indicate that Aboriginal groups in the Study Area compare favorably to other Aboriginal communities on most of these indicators, but still lag behind the non-Aboriginal population.

Aboriginal Affairs and Northern Development Canada (AANDC) has developed a Community Well-Being (CWB) Index as a means of measuring socio-economic well-being in First Nations, Inuit and other Canadian communities. This Index uses Statistics Canada's Census of Population data to produce 'well-being' scores for individual Canadian communities based on a limited set of indicators: income, education, housing, and labour force activity. Of the Aboriginal communities in the study area, only Fort McKay is included in the CWB Index.[6] Fort McKay's overall CWB score, provided in Table 4.5, was among the highest scores for First Nations communities in the province, but still below most non-Aboriginal communities and well below the CWB Index Score for the Wood Buffalo region (87) (AANDC 2011).

[6] CWB scores are available for every community in Canada that meets the following criteria:
1) It has a population of at least 65.
2) It was an "incompletely enumerated reserve." A reserve is deemed incompletely enumerated if it was not permitted to be enumerated or if enumeration was incomplete or of insufficient quality.
3) Its global non-response rate was not greater than or equal to 25%. Global non-response rate is the percentage of required responses left unanswered by respondents.

Table 4.5 Community Well-Being Index: Fort McKay (2006)

Income Score	Education Score	Housing Score	Labour Force Activity Score	Community Well-Being Score
78	25	81	76	65

Source: Aboriginal Affairs and Northern Development Canada (AANDC), Community Well-Being Index. 2006. Last Modified: February 2011. Available at: http://www.aadnc-aandc.gc.ca/eng/1298466791276

Note: The CWB Index is a limited measure which does not take account of a number of other social determinants of health including the availability of social support networks, social environment, personal health practices and coping skills, and others.

4.3.1.5 Service Delivery

Existing Services

Table 4.6 provides an overview of current health and social services in Fort McMurray, Fort McKay and Fort Chipewyan. Although there are some social services specific to particular Aboriginal group members, most health and social services offered are open to all members of the community, regardless of First Nation membership or Métis association.

Table 4.6 Health and Social Services

Fort McMurray	Fort McKay	Fort Chipewyan
Health Services		
• Alberta Health Services (North Zone) has primary responsibility for the delivery of many provincially funded health services in the study area. • A number of these services are offered through the Northern Lights Regional Health Centre in Fort McMurray, including acute care, continuing care, 24-hour emergency, laboratory, x-ray, mental health, ambulatory care, rehabilitation, home care, and community health. The Centre also has an Aboriginal Liaison Coordinator to assist Aboriginal in-patients, clients and their families.	• In most First Nations communities, community health programs are delivered by a local Health Centre (FNIH 2010a). In Fort McKay, health services are provided to residents through the Fort McKay Health Centre. The Centre has a Cultural Coordinator, a Mental Health Therapist, and a Homecare and Community Health nurse. A number of public health services are provided such as immunizations, vaccinations, and baby check-ups. • While Fort McKay Health Centre services include visits to the community by a physician and periodic visits by a dentist, Fort McKay residents remain reliant on the Northern Lights Regional Health Centre for many medical services including emergency and acute care.	• Aboriginal communities that are defined as remote or isolated are served by nursing stations that provide community health programs as well as primary care. The Nunee Health Authority (NHA), which is responsible for the administration of health programs and services in Fort Chipewyan, operates a nursing station and Wellness Centre in the community. • Health services provided include, among others, emergency treatment by in-town nursing staff, weekly physician visits, monthly dentist visits, monthly psychologist visits, optometrist visits four times a year, home care, and public health initiatives. Wellness programs offered include the Sexual Abuse Healing Program, Tobacco Reduction Program, and Residential School Healing Program. Telehealth services are also offered including diabetic workshops.

Table 4.6 Health and Social Services (continued)

Fort McMurray	Fort McKay	Fort Chipewyan
Health Services (continued)		
• Primary care services in the area are provided by individual family physicians in the region, all of whom belong to the Wood Buffalo Primary Care Network (PCN). Established in 2006, the Wood Buffalo PCN connects local family physicians with other health professionals such as nurses, dieticians, pharmacists, and others, in providing comprehensive team-based primary care to residents of the region.	• The breadth of health services available at the Fort McKay Centre have expanded in recent years. Future services are also being considered at the Health Centre including Internal Medicine Specialist visits, pharmacy services, and dentist and optometrist clinics (FMFN 2012a).	• The Nunee Health Authority (NHA) has a memorandum of understanding with Alberta Health Services to deliver health services to all residents in that community. • The MCFN, ACFN and Métis in Fort Chipewyan each appoint a member to the Nunee Health Authority Board of Directors.
Social Services		
• There is a full range of social services in Fort McMurray, including family and child support services offered through the Northeast Alberta Child and Family Services Authority; the municipal Family and Community Support Services (FCSS); the Alberta Alcohol and Drug Abuse Commission; and a number of nongovernmental agencies, such as the Salvation Army, the Canadian Mental Health Association and SOS. The YMCA is the primary provider of childcare services.	• Fort McKay First Nation and Alberta Health Services are currently in the process of renewing an agreement for the delivery of some basic community health programming. • Key social service providers include Family and Community Support Services (FCSS), a partnership between the Government of Alberta and the municipality, and the Fort McKay Wellness Centre. Programs and services provided through the Wellness Centre include the Children's After School Program, the Supper Program for children and youth, Summer Day Camp Program, Junior Leaders Program, DiscoverE Science Camp (sponsored by Shell), Theatre Camp, and, the Fort McKay/Shell Canada Youth Leadership Program.	• Family and Community Support Services (FCSS), a partnership between the Government of Alberta and the municipality, provides counseling, youth and senior services and support for community events. • Paspew House, funded by contributions from Aboriginal Affairs and Northern Development Canada (AANDC) and Health Canada, provides emergency transitional housing for mothers and children suffering from abuse or wishing to leave abusive relationships. • MCFN has a Social Enhancement program for members residing in Fort Chipewyan or on the Allison Bay or Dog Head Reserves. The program assists members with a basic living allowance, and can be used to support a member's basic costs of housing and meals while residing in Fort Chipewyan. Program funds come from AANDC (MCFN 2009b).

Table 4.6 Health and Social Services (continued)

Fort McMurray	Fort McKay	Fort Chipewyan
Social Services (continued)		
• There are several substance abuse treatment programs and facilities in and around Fort McMurray including the Pastew Place Detoxification Centre, an out-patient non-medical approach to addiction; and the Mark Amy Treatment Centre, located just south of Fort McMurray in Anzac, which is the only residential adult treatment center in the Wood Buffalo region. Its programs have a cultural component for Aboriginal people and they offer lectures by Elders, a sweat lodge and pipe and sweetgrass ceremonies.	• There is a Community Development Team in Fort McKay whose aim is: *"To identify, and address community issues and implement safe and healthy programs to support a holistic lifestyle in the community of Fort McKay."* (FMFN 2012b) • The new Fort McKay Elder and Day Care Centre – an 8,700 ft^2 facility – opened in January 2010 after fire destroyed the original building in 2007.	• The Mikisew Elders Program has a small staff which includes a handyman (to assist elder home owners and dwellers with maintenance issues) and a home care worker, whose function is to support the elders with regular home visits (MCFN 2009c). • Conversion of the former nursing station into a care facility for elders in Fort Chipewyan is currently underway, funded by the MCFN, with a contribution from Shell.

Service Delivery Issues

Health Services

Aboriginal groups in the region have voiced their concern with regards to the demands placed on health services due to recent population growth in the region (RSCEP 2010). Demands related to the influx of new residents has largely fallen on the urban service area, but Fort McKay and Fort Chipewyan community members are also reliant on the Fort McMurray hospital for many medical services and are concerned about long wait times at, for example, the emergency department. Issues in delivering adequate health services to the residents of the region include:

- the need for additional health infrastructure, including a continuing care facility; and
- difficulty in recruiting and retaining health care professionals and support staff – a national challenge that is intensified by difficulties in attracting staff because of the region's remote location, lack of affordable housing, higher cost of living, and stiff wage competition.

To enhance the ability of Aboriginal patients to access the health system and receive the services they need, services also need to be responsive to the language and cultural needs of Aboriginal peoples. This is an ongoing challenge not just within the region but across the health system.

Progress has been made on a number of fronts over the past few years in addressing health delivery challenges in the region. Specifically:

- additional doctors have been recruited to the urban area;
- additional funding has been provided to address health-related growth pressures;
- emergency department wait times have been reduced; and
- investments in regional health infrastructure have been made, including:
  - two new community health centres in the urban area;
  - renovations to the ambulatory and emergency departments of the Northern Lights Regional Health Centre;
  - a commitment to add continuing care spaces in Fort McMurray; and
  - renovations to the nursing station in Fort Chipewyan to transition it into a care facility for Elders.

Improvements have been made in delivering health services for all residents, including Aboriginal people. In 2011/12, 84% of patients at the Northern Lights Regional Health Centre Emergency Department (ED) were treated and discharged within the targeted 4 hours, the best performance among the 16 higher volume emergency departments in the province (AHS 2013).

Social Services

Challenges in recruiting and retaining staff are echoed in the social service sector as well. Oftentimes experienced workers have been attracted away by higher-paying jobs or better working conditions in other sectors. In addition, decreases in volunteerism resulting from increased work demands are also a concern.

In line with many social service providers in the province, the agencies in outlying communities such as Fort McKay and Fort Chipewyan are challenged by the sometimes ad hoc and project-specific funding that is provided.

Despite the presence of a number of social issues, there are fewer social services available in Fort McKay and Fort Chipewyan as compared to the urban service area. The need for substance abuse programs has been raised in both communities. The isolated

nature of both communities presents challenges for delivering services in the communities (e.g., staff recruitment, costs) as well as making it more difficult for people in these communities to access services in Fort McMurray (e.g., distances, lack of all-weather road to Fort Chipewyan).

Steps have been taken to improve social service delivery in the region in the past few years including increased provincial funding and cost-of-living allowances for provincially funded organizations in Fort McMurray. In addition, a number of broader-based programs run by the provincial government benefit the RMWB, such as Alberta's 10-year provincial strategy to end homelessness and Alberta's Making Space for Children: Child Care Space Creation Innovation Fund (AHUA 2009; ACYS 2009).

At the municipal level, the recently completed a review of 21 municipal service functions, including family and community support services, in rural communities in the region. The Rural Service Delivery Review Report is intended to serve as a guiding document for the municipality to strategically direct and coordinate rural service delivery (RMWB 2010).

Industry has also provided support over the years for community-level initiatives including social groups providing assistance to those in need. In 2010, oil sands companies contributed over $5.5 million to Aboriginal communities in the Wood Buffalo and Lac La Biche regions for school and youth programs, celebrations, cultural events, literacy, community projects and other programs. Over the last eight years, industry has provided $80 million in donations to a variety of groups and organizations in the Wood Buffalo region (OSDG 2011).

4.3.2 Effects Assessment

4.3.2.1 Project Effects

The effect of Shell's PRM project on local health and social services and infrastructure will largely follow population effects, falling on the urban service area. The project is not anticipated to appreciably affect the demand for services.

Shell has committed to operating an on-site medical facility for the Project. The primary purpose of operating an on-site medical facility is to mitigate the effect of Shell's project on local health services. On-site medical facilities will provide primary care to on-site workers, and manage minor health issues and injury incidents without drawing on local health services provided by Alberta Health Services.

As part of its planning process, Shell is exploring ways of maximizing benefit to local communities from the establishment of on-site medical facilities, including:

- as a signatory to the Wood Buffalo Mutual Aid Agreement, placing on-site medical facility staff and equipment resources at the disposal of the local hospital in the event of major medical emergencies such as a pandemic or a major industrial accident in the region; and

- recruiting health care professionals, including physicians, for on-site medical facilities from outside the Wood Buffalo region, such as from Edmonton and Calgary.

To minimize health and social impacts, Shell employees – including Aboriginal workers and those using the FIFO option in Fort Chipewyan – will also have access to the employee assistance plan, which provides support for families and individuals who may experience difficulty dealing with personal, family, or work life issues that can impact one's health and well-being.

Shell also supports a number of community initiatives for Aboriginal peoples that help communities maintain their social cohesion and unique characteristics. As an example, Shell provided $4 million in support of the rebuilding of the Fort McKay Elders Centre. Shell also supports the delivery of youth programs in Fort McKay such as the University of Alberta's DiscoverE Science Camp and the Fort McKay/Shell Canada Youth Leadership Program. In Fort Chipewyan, Shell has supported Elder/Youth programs, historical preservation initiatives, and most recently the renovation of the existing nursing station in Fort Chipewyan into a full-fledged care facility for Elders. Also, Shell, as a member of the Oil Sands Leadership Initiative (OSLI) has also supported the Fort Chipewyan Pilot, a non-profit society formed in 2012, to work on developing community vision, processes, and structures. One initiative arising out of the Pilot was Culture Camp, which focused on engaging youth and adults in both traditional and cultural elements (OSLI 2013).

More generally, Shell and its joint venture partners have contributed over $16 million to more than 170 not-for-profit organizations since 2003 aimed at promoting community well-being. These organizations and initiatives benefit both Aboriginal and non-Aboriginal people in the region.

This analysis of the Project's effects on health and well-being does not allow for a distinction between the different First Nations and the other Aboriginal Groups in the region. The available data is mostly organized on geography. Many of the issues and concerns were raised in consultations with Shell and review of Aboriginal studies and reports confirm common issues and concerns among Aboriginal groups.

4.3.2.2 Future Development

Current and planned development in the oil sands industry will contribute to both the positive and negative effects on health and well-being already noted. From the perspective of some Aboriginal people, further development will add to and potentially accelerate existing stressors, especially those related to the uptake of traditional lands for development and participation in the wage economy. However, development also offers opportunities – via employment, business opportunities, benefit agreements, contributions to local community initiatives, and taxes paid to government – for Aboriginal groups in the region to address the physical and social conditions that are contributing to negative health outcomes for their members.

Further development will also contribute to improved transportation networks in the region, further connecting the smaller, Aboriginal communities with outside influences. There is concern that these improvements in transportation, along with the increased presence of non-Aboriginals in the region, will offer community members increased access to alcohol and drugs, as well as provide increased opportunities for non-Aboriginals to access traditional lands for recreational purposes. At the same time though, improved access to these communities also means access for community residents to improved amenities and services, including health and social services.

Population growth assumed under the 2013 Planned Development Case will increase demand for health and social infrastructure and services in the region, requiring additional facilities, programming and staffing. These effects will fall largely on the urban service area. Effects on Fort Chipewyan and Fort McKay will be in relation to the degree that economic activity generated by future development assists in retaining current Aboriginal peoples in their communities or attracting Aboriginal peoples back to these communities from other locations. Service providers are in a better position to deal with increased growth than in previous years largely as a result of additional resources made available and planning being carried out, including the construction of additional infrastructure. These planning initiatives need to be properly resourced and carried out in a timely manner so as to avoid pressures associated with growth.

It is recognized that the distribution of health and social effects is not equally shared among all community members. Those with education, employment, stronger support systems and internal resiliency will likely cope better with, and obtain more benefits from, change.

Many industry operators in the area are carrying out initiatives to reduce the effects of oil sands development on regional health and social services and infrastructure. A number of oil sands companies have their own health care facilities at their work sites to treat employees and contractors. Some companies, including Shell, have also signed mutual aid agreements to complement and enhance existing emergency and health services.

Table 4.7 Summary of Issues by Aboriginal Group: Health and Well-Being

All Groups	ACFN Members on Reserve and in Fort Chipewyan	MCFN Members on Reserve and in Fort Chipewyan	Métis in Fort Chipewyan	FMFN Members in Fort McKay	Métis in Fort McKay	FMcFN Members on Reserve	FMcFN and Other Aboriginal Group Members in Fort McMurray
• Concerns have been raised by Aboriginal groups in the area in regards to a number of health issues. Discussions with Alberta Health Services indicate that rates of diabetes, smoking, drinking, sexually transmitted infections, and drug use are higher among the Aboriginal peoples in the region as compared to the general population. • According to Statistics Canada data, approximately 85% of Aboriginal identity respondents in the region reported their health as good, very good or excellent. This is comparable to Aboriginal identity respondents in other regions and to the rural and urban provincial averages for the Aboriginal identity population. • According to Statistics Canada data, approximately 45% of Aboriginal identity respondents in the region reported that they had one or more chronic health conditions. This is somewhat lower than Aboriginal identity respondents in other regions and the rural and urban provincial averages for the Aboriginal identity population.	• The impact of oil sands development upon individual and community health is the most prevalent of all social issues raised by community members, according to supplementary information filed by the Athabasca Chipewyan First Nation during the recent Jackpine Mine Expansion regulatory process. • Concerns with the potential health effects related to water quality are particularly prevalent in Fort Chipewyan due to the community's downstream location. • Cancer rates have been an especially important issue to Aboriginal groups in Fort Chipewyan.	• Concerns with the potential health effects related to water quality are particularly prevalent in Fort Chipewyan due to the community's downstream location. • Cancer rates have been an especially important issue to Aboriginal groups in Fort Chipewyan. • The MCFN has indicated that they will not take part in the provincial government three-year community health assessment study because of concerns over the study's focus (i.e., cancer rates relative to other health issues), the level of community involvement, and ownership of the data.	• Concerns with the potential health effects related to water quality are especially prevalent in Fort Chipewyan due to the community's downstream location. Cancer rates have been an especially important issue. • A three-year community health assessment study is being planned by the provincial government. The study is expected to involve Fort McKay First Nation, Athabasca Chipewyan First Nation, Fort McKay Métis, and the Nunee Health Authority. • Work commitments take members away from their home community for extended periods of time in order to access employment, decreasing the quantity of time available to spend with family.	• Concerns with the potential health effects related to air quality (e.g., dust, odours) are especially prevalent in Fort McKay due to the community's proximity to development. • A three-year community health assessment study is being planned by the provincial government. The study is expected to involve Fort McKay First Nation, Athabasca Chipewyan First Nation, Fort McKay Métis, and the Nunee Health Authority. • Work commitments take members away from their home community for extended periods of time in order to access employment, decreasing the quantity of time available to spend with family.	• Concerns with the potential health effects related to air quality (e.g., dust, odours) are especially prevalent in Fort McKay due to the community's proximity to development. • Work commitments take members away from their home community for extended periods of time in order to access employment, decreasing the quantity of time available to spend with family. • Decreased community cohesion and a sense of transience associated with the movement of community members to and from larger centres, such as Fort McMurray. • Despite the presence of a number of social issues, there are fewer social services available in Fort McKay as compared to the urban service area.	• Decreased community cohesion and a sense of transience associated with the movement of community members to and from larger centres, such as Fort McMurray. • FMcFN members on reserve are reliant on the Fort McMurray hospital for many medical services and are concerned about long wait times. • Members have to travel to Fort McMurray for many services, increasing the time and cost associated with accessing those services.	• Demands related to the influx of new residents has largely fallen on the urban service area. • There is difficulty in recruiting and retaining health care professionals and support staff in Fort McMurray – a national challenge that is intensified because of the region's remote location, lack of affordable housing, higher cost of living, and stiff wage competition. • Progress has been made on a number of fronts over the past few years in addressing health delivery challenges in the region, including: recruiting additional doctors; additional funding; reduction in emergency department wait times; and investments in regional health infrastructure.

Table 4.7 Summary of Issues by Aboriginal Group: Health and Well-Being (continued)

All Groups	ACFN Members on Reserve and in Fort Chipewyan	MCFN Members on Reserve and in Fort Chipewyan	Métis in Fort Chipewyan	FMFN Members in Fort McKay	Métis in Fort McKay	FMcFN Members on Reserve	FMcFN and Other Aboriginal Group Members in Fort McMurray
• All Aboriginal groups in the area have raised concerns in regards to the health effects caused by environmental changes brought about by oil sands development. Concerns have been raised with respect to such things as: air quality; water quality; and quality of country foods and other resources. • Aboriginal groups have also identified several indirect health concerns caused by environmental changes brought about by oil sands development, including increased stress and anxiety; a feeling of dislocation from the land and traditional culture; and the potential for reduced physical activity and an increased reliance on store-bought food. • The availability and abuse of alcohol, illicit drugs and prescription pills has been raised consistently by all Aboriginal groups as a serious concern. The stresses being placed on families dealing with alcohol and drug abuse issues contribute to concerns that youth might not be receiving adequate direction and support. • Care and support for elders who face a relatively high cost of living with few financial means is also a concern across Aboriginal groups.	• A three-year community health assessment study is being planned by the provincial government. The study is expected to involve the Athabasca Chipewyan First Nation, Fort McKay First Nation, Fort McKay Métis, and the Nunee Health Authority. • Work commitments take members away from their home community for extended periods of time in order to access employment, decreasing the quantity of time available to spend with family. • Decreased community cohesion and a sense of transience associated with the movement of community members to and from larger centres, such as Fort McMurray.	• Work commitments take members away from their home community for extended periods of time in order to access employment, decreasing the quantity of time available to spend with family. • Decreased community cohesion and a sense of transience associated with the movement of community members to and from larger centres, such as Fort McMurray. • Despite the presence of a number of social issues, there are fewer social services available in Fort Chipewyan as compared to the urban service area. • There is difficulty in recruiting and retaining health care professionals and support staff to a remote community such as Fort Chipewyan.	• Decreased community cohesion and a sense of transience associated with the movement of community members to and from larger centres, such as Fort McMurray. • Fly-in/fly-out (FIFO) arrangements allow community members to engage in wage employment opportunities while maintaining social and family connections in Fort Chipewyan. According to Sonny Flett, former President of the Fort Chipewyan Métis Local, Syncrude's current fly-in rotational program, "*is very beneficial because people are able to still maintain contact with their family and uphold a traditional lifestyle*." • Despite the presence of a number of social issues, there are fewer social services available in Fort Chipewyan as compared to the urban service area.	• Decreased community cohesion and a sense of transience associated with the movement of community members to and from larger centres, such as Fort McMurray. • Wage employment in the region can also drive positive social effects, including an increased sense of self-worth and sense of control. This concept of self-reliance is more focused on individual effort and achievement as opposed to the more traditional concept that is focused more so on communal efforts and achievements.	• Agencies in outlying communities such as Fort McKay are challenged by the sometimes ad hoc and project-specific funding that is provided. • Fort McKay community members are reliant on the Fort McMurray hospital for many medical services and are concerned about long wait times. Travel to Fort McMurray also increases the time and cost associated with accessing those services.		• In 2011/12, 84% of patients at the Northern Lights Regional Health Centre Emergency Department (ED) were treated and discharged within the targeted 4 hours, the best performance among the 16 higher volume emergency departments in the province.

Table 4.7 Summary of Issues by Aboriginal Group: Health and Well-Being (continued)

All Groups	ACFN Members on Reserve and in Fort Chipewyan	MCFN Members on Reserve and in Fort Chipewyan	Métis in Fort Chipewyan	FMFN Members in Fort McKay	Métis in Fort McKay	FMcFN Members on Reserve	FMcFN and Other Aboriginal Group Members in Fort McMurray
• Aboriginal groups have flagged that increased wage economy participation can drive negative social effects, including: increased social and family stressors; negative behavioural changes among some community members; increased income disparity; decreased community cohesion; increased mental stress and anxiety; and increased exposure to, and pressure to act according to, outside social values that might run contrary to traditional values. • The relationship between Aboriginal peoples and their traditional lands is integral to community well-being. From the perspective of Aboriginal peoples in the region, this mutually sustaining relationship has defined their identity over the centuries. • Aboriginal peoples in the region are concerned that reduced engagement in traditional activities has affected community well-being and contributed to ongoing social changes. Examples include changes in social values and norms, such as sharing, cooperation, and connectedness; changes in social relationships, such as a weakening of bonds between elders and youth; and a reduced sense of self-sufficiency and an increased reliance on store-bought foods and the wage economy.	• Fly-in/fly-out (FIFO) arrangements allow community members to engage in wage employment opportunities while maintaining social and family connections in Fort Chipewyan. Information submitted by ACFN during the recent Shell JPME regulatory hearing notes that a FIFO option in Fort Chipewyan was identified as a potential benefit by a large majority of participants. • Despite the presence of a number of social issues, there are fewer social services available in Fort Chipewyan as compared to the urban service area. • There is difficulty in recruiting and retaining health care professionals and support staff to a remote community such as Fort Chipewyan.	• Agencies in outlying communities such as Fort Chipewyan are challenged by the sometimes ad hoc and project-specific funding that is provided. • RMWB recently completed a review of 21 municipal service functions, including family and community support services, in rural communities in the region. The Rural Service Delivery Review Report is intended to serve as a guiding document for the municipality to strategically direct and coordinate rural service delivery. • MCFN members in Fort Chipewyan are reliant on the Fort McMurray hospital for many medical services and are concerned about long wait times. Travel to Fort McMurray also increases the time and cost associated with accessing those services.	• There is difficulty in recruiting and retaining health care professionals and support staff to a remote community such as Fort Chipewyan. • Agencies in outlying communities such as Fort Chipewyan are challenged by the sometimes ad hoc and project-specific funding that is provided. • RMWB recently completed a review of 21 municipal service functions, including family and community support services, in rural communities in the region. The Rural Service Delivery Review Report is intended to serve as a guiding document for the municipality to strategically direct and coordinate rural service delivery.	• Aboriginal Affairs and Northern Development Canada (AANDC) have developed the Community Well-Being (CWB) Index as a means of measuring socio-economic well-being in First Nations, Inuit and other Canadian communities. Fort McKay's overall CWB score is among the highest scores for First Nations communities in the province, but still below most non-Aboriginal communities and well below the CWB Index Score for the Wood Buffalo region. • Despite the presence of a number of social issues, there are fewer social services available in Fort McKay as compared to the urban service area. • Agencies in outlying communities such as Fort McKay are challenged by the sometimes ad hoc and project-specific funding that is provided.			

Table 4.7 Summary of Issues by Aboriginal Group: Health and Well-Being (continued)

All Groups	ACFN Members on Reserve and in Fort Chipewyan	MCFN Members on Reserve and in Fort Chipewyan	Métis in Fort Chipewyan	FMFN Members in Fort McKay	Métis in Fort McKay	FMcFN Members on Reserve	FMcFN and Other Aboriginal Group Members in Fort McMurray
• Social conditions for Aboriginal peoples should also be placed within the larger context of past and current events. Past government policies of racism and social exclusion, including the legacy of residential schools, has created conditions of disadvantage for Aboriginal peoples. Current experiences with racism and social exclusion can also create stressors and negatively impact social conditions as well as health outcomes. • With regards to broader socio-economic determinants of health – such as educational attainment levels, income levels, labour market attachment and housing conditions – information in other sections of this report indicate that Aboriginal groups in the Study Area compare favorably to other Aboriginal communities on most of these indicators, but still lag behind the non-Aboriginal population. • Aboriginal groups in the region have voiced their concern with regards to the demands placed on health services due to recent population growth in the region. • In 2010, oil sands companies contributed over $5.5 million to Aboriginal communities in the Wood Buffalo and Lac La Biche regions for school and youth programs, celebrations, cultural events, literacy, community projects and other programs. Over the last eight years, industry has provided $80 million in donations to a variety of groups and organizations in the Wood Buffalo region.	• Agencies in outlying communities such as Fort Chipewyan are challenged by the sometimes ad hoc and project-specific funding that is provided. • RMWB recently completed a review of 21 municipal service functions, including family and community support services, in rural communities in the region. The Rural Service Delivery Review Report is intended to serve as a guiding document for the municipality to strategically direct and coordinate rural service delivery. • ACFN members in Fort Chipewyan are reliant on the Fort McMurray hospital for many medical services and are concerned about long wait times. Travel to Fort McMurray also increases the time and cost associated with accessing those services.		• Métis in Fort Chipewyan are reliant on the Fort McMurray hospital for many medical services and are concerned about long wait times. Travel to Fort McMurray also increases the time and cost associated with accessing those services.	• Fort McKay community members are reliant on the Fort McMurray hospital for many medical services and are concerned about long wait times. Travel to Fort McMurray also increases the time and cost associated with accessing those services.			

Industry already supports a number of health and social programs offered in Fort McKay, Fort Chipewyan and Fort McMurray. As an example, industry has contributed the majority of the $10 million in funds that the Northern Lights Health Foundation has provided to AHS for health funding in the region (Chaffey 2013, pers. comm.). Increased industrial activity in the region could increase opportunities for additional industry support for health and social programs in these communities.

4.4 Housing

4.4.1 Situation Analysis

4.4.1.1 Introduction

The following section provides information on:

- housing programs for First Nations and Métis in the study area,
- private market housing in Fort McKay and Fort Chipewyan, and
- non-market housing and homelessness, particularly in the urban service area.

Table 4.8 provides a summary of information by individual Aboriginal group, to the extent possible.

4.4.1.2 First Nations and Métis Housing

On-reserve housing is delivered mostly by the First Nations with financial assistance from AANDC and the Canadian Mortgage and Housing Corporation (CMHC).

The FMFN has an active housing program and the housing stock in Fort McKay has received large-scale investment. There are currently 13 houses under construction and the FMFN have long-range plans to build up to 25 houses per year until housing needs are met. As of spring 2013, there were approximately 74 people on the waiting list (FMFN 2013).

The MCFN has housing on the Dog Head and Allison Bay reserves near Fort Chipewyan and builds between two and four new housing units a year. The MCFN housing program has a waiting list.

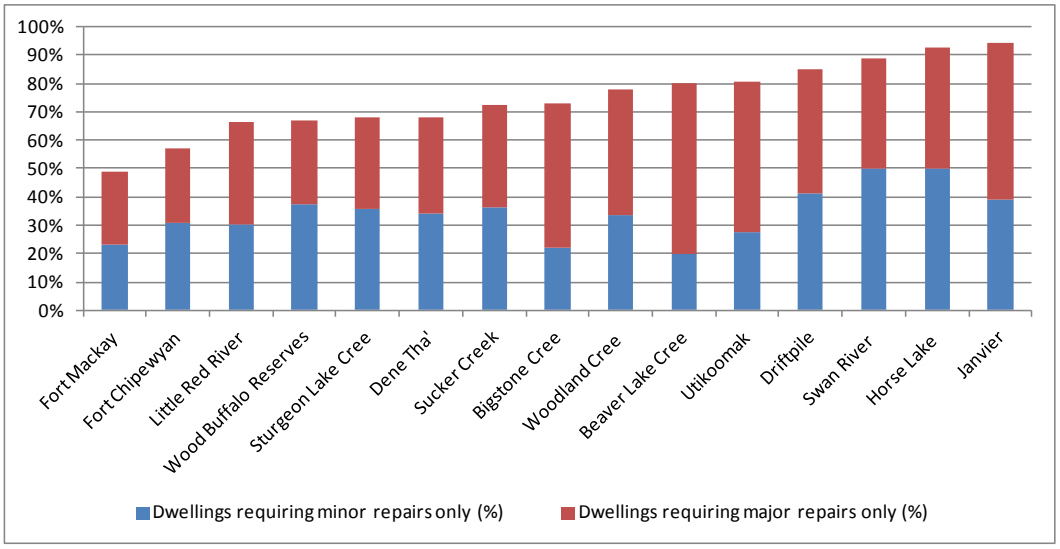
The ACFN's housing program focuses on properties within the Hamlet of Fort Chipewyan and builds between two and four new housing units a year. The ACFN housing program also has a waiting list. The ACFN have flagged the availability of land on which to build as a constraint for future housing construction (MacDonald 2012). The ACFN is exploring the idea of an urban reserve on residential lots located within the Hamlet.

Both the ACFN and MCFN housing programs are constrained by limited funding, relatively higher costs for building materials, and limited technical oversight and community construction capacity (e.g., lack of skilled workers).

Housing for Métis is a concern. The quality and needed supply of housing stock for Métis in Fort McKay lags that of the FMFN. The Métis Local 63 has plans to develop its first housing project for members, a four-unit development, starting in the summer of 2013 (FMT 2013). Potential funding for this housing program may come from profits generated by Métis Local-owned companies. For Métis in Fort Chipewyan, Métis Local 125 has limited resources to support a housing program and most Métis live in privately-owned housing in the community.

The housing programs of the FMFN, ACFN and MCFN are reflected in the quality of the housing stock in the communities. An estimated 50% and 60% of dwellings require major or minor repair in Fort McKay and Fort Chipewyan, respectively. This is higher than the provincial average of 34% of housing units requiring repair, but lower than in many other Aboriginal communities in northern Alberta, as shown in Figure 4.10.

Figure 4.10 Dwellings Requiring Minor and Major Repairs



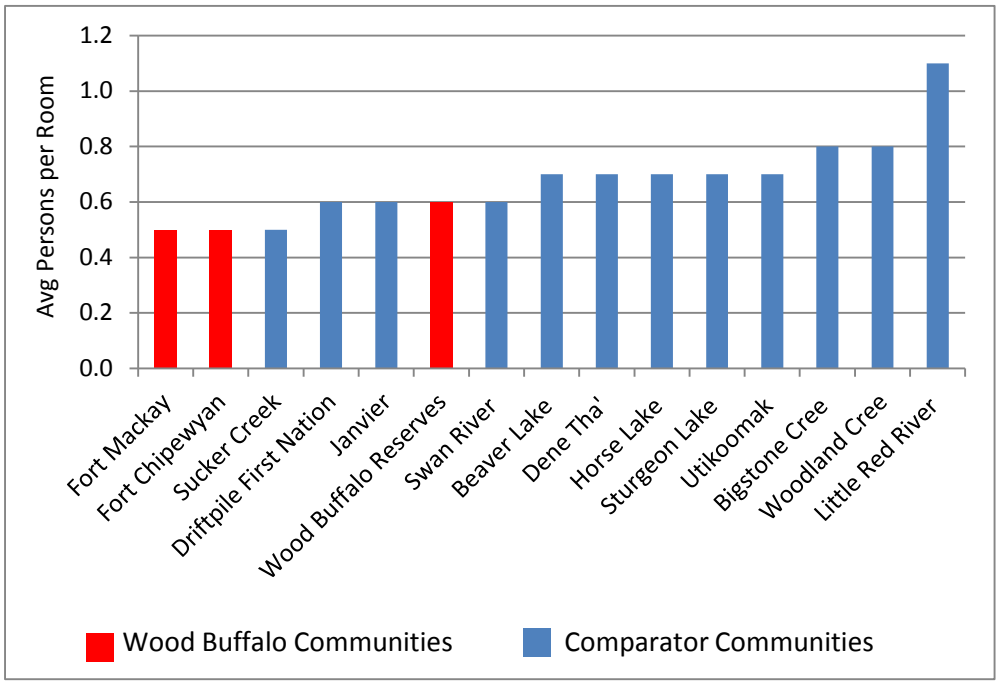
Source: Statistics Canada. 2007. 2006 Aboriginal Population Profile. 2006 Census.
Note: 2006 is the latest year for which data is available.
Note: Wood Buffalo Reserves includes the reserve communities of the MCFN, ACFN, and FMcFN.

Figure 4.10 is based on 2006 Federal Census data, the most recent housing data available and do not reflect the housing initiatives from First Nations since 2006.

The crowding levels in Fort McKay and Fort Chipewyan show a similar picture. Fort Chipewyan and Fort McKay both show densities of 0.5 persons per room, while other

Wood Buffalo reserves have a density of 0.6, as shown in Figure 4.11. These density rates are at the lower end of northern reserves, and are in line with the provincial and national averages. Density levels experienced by Aboriginal persons are a concern in the region, as they are in Aboriginal communities across the country. Over-crowding can intensify family stressors and contribute to social issues within a community.

Figure 4.11 Crowding Levels



Source: Statistics Canada. 2007. 2006 Aboriginal Population Profile. 2006 Census.
Note: 2006 is the latest year for which data is available.
Note: Wood Buffalo Reserves includes the reserve communities of the MCFN, ACFN, and FMcFN.

4.4.1.3 Private Market Housing

There is limited or no private market for housing in Fort McKay, as all housing stock is either band-owned or on land leased by the Métis local.

A private housing market exists in Fort Chipewyan, albeit limited in formal transactions, reflecting the community's isolation, relatively small size, limited incomes and presence of Band housing programs. The market for private housing is emerging as more ACFN, MCFN, and Métis community members become engaged in industrial activity, supported by the fly-in/fly-out operation of oil sands developers and the development of the ACFN Group of Companies and the MCFN Group of Companies. On average roughly five or so private housing transactions take place in Fort Chipewyan annually. Prices tend to be in the range of $20,000 to $30,000 for lots and $100,000 to $200,000 or more for detached houses, depending on dwelling quality.

The Municipality owns a number of lots in the hamlet and is examining a variety of options for increasing the number of private lots available to residents.

4.4.1.4 Non-Market Housing and Homelessness

As noted in Section 4.1, Population, Fort McMurray is home to the largest contingent of Aboriginal persons in the region. Fort McMurray has a high-cost housing environment, with the highest average rental rates and house prices in the province. The average single detached house sale price in 2012 was $751,000, while one-bedroom apartment rents were averaging $1,650 per month (WB 2013). High housing costs affect the entire population, but for Aboriginal residents, who tend to have lower income levels, the effect is felt more acutely. Further discussion of housing issues and government and market responses are provided in Appendix 2, Attachment B.

Wood Buffalo Housing and Development Corp (WBHDC) provides affordable housing in the region. The majority of its portfolio is in Fort McMurray, with approximately 1,250 units of affordable rental housing. It has recently developed 250 units of affordable ownership housing through its second mortgage program and is in the process of constructing an additional 175 units ready for occupancy by 2015. (Lutes 2013 pers. comm.). WBHDC does not track clientele by race or ethnicity and has no estimates regarding the segment of demand or access represented by Aboriginals. Métis Urban Housing Corporation, a fully owned board-governed affiliate of the Métis Nation of Alberta, has 10 units in Fort McMurray. These non-market housing units are available to both Métis and other Aboriginal persons and families.

The WBHDC also has five affordable housing units, 15 seniors lodge units and 10 seniors independent living units in Fort Chipewyan. The corporation is examining a new project to convert the 15 seniors lodge units to assisted living units, which are required in the community. An agreement between AHS, Alberta Health and the First Nations in the community regarding provision of health care services must be reached before the units can be repurposed (Lutes 2013).

Homelessness is an issue in the region, due to the high housing costs and in-migration of people from outside the region, many of whom have limited or no local support networks. The RMWB has a 10-year plan to end homelessness, which identified roughly one-quarter of the 550 homeless population in 2008 to be Aboriginal. By 2010 the homeless population had decreased significantly to about 320, with roughly one-third identified as Aboriginal. Those numbers remain virtually unchanged in 2012 (RMWB 2012b).

There are no Aboriginal-specific organizations directly addressing homelessness, but many organizations are active on the issue on behalf of the entire population. Homelessness also exists in Fort McKay and Fort Chipewyan, and tends to manifest itself as individuals staying with family and friends. When individuals in rural communities

exhaust their local family and support networks, they tend to migrate to the urban centre where emergency shelters, transitional housing and other housing and support options are concentrated.

4.4.2 Effects Assessment

4.4.2.1 Project Effects

The Project effects on housing are directly related to its effect on population. Shell's PRM project will not be a sizeable driver of population growth in the region. Owing to the Project's distance from Fort McMurray, the Project's on-site construction and operations workforces will be housed in camps. Growth in the resident population related to the Project is expected to be accommodated in the urban service area. When construction is complete and the project has reached full operations hiring, the long-term population impact of the project on the urban service area is expected to be about 1% above the 2013 Base Case.

The Project is not expected to have a substantial direct population effect and thus housing effect on Fort McKay or Fort Chipewyan. The Project will expand the employment and contracting opportunities for Fort McKay and Fort Chipewyan community members and companies. Some of these opportunities may be taken up by currently unemployed community members and youths as they enter the workforce. This expansion of the employment opportunities may limit the need for community members to move away in search of employment and attract Aboriginal peoples back to their communities from other locations, creating an indirect effect on housing.

Shell is actively engaged in the issue of homelessness. It provided a $1.2 million contribution to the Northern Lights Foundation for the Fort McMurray Health Improvement Initiative. This three-year Alberta Health and Wellness initiative is specifically designed to improve the health of Fort McMurray's inner-city homeless population (AHS 2011).

Information on current housing in the region allows for some differentiation among First Nations on the one hand and other Aboriginal groups on the other hand. On-reserve housing is supported by AANDC and CMHC and the respective Bands, with Band-owned housing in Fort McKay seeing more growth and improvements than First Nations housing in Fort Chipewyan. Housing for Métis persons and families, as well as for all Aboriginal persons living in Fort McMurray, relies on market housing, and some limited non-market housing.

The Project's effects on housing does not allow for a distinction between the different First Nations and the other Aboriginal groups in the region. The pathway of the Project effect on housing includes employment and population growth and, as discussed above, these effects occur mostly on the community level.

4.4.2.2 Future Development

Cumulative oil sands development and the associated employment growth will continue to drive in-migration to Fort McMurray, maintaining housing demand and high prices, until sufficient new supply becomes available. Some relief in pricing and availability may occur once land availability constraints are reduced through opening up Parsons Creek North and Saline Creek and, more generally, by the increased certainty around land release that is part of the Urban Development Sub Region. New transportation options are also necessary in order to facilitate access to and development of new residential communities.

For those persons, including Aboriginal persons, who work in the oil sands industry, the cost of housing is offset to some degree by high income. Housing costs will remain an issue for those Aboriginal and non-Aboriginal persons working in the service sector or who are dependent on government transfers. Affordable housing is expected to remain in limited supply.

The cumulative effect of oil sands industry development is expected to further the development of a market for housing in Fort Chipewyan. As more residents in Fort Chipewyan become employed with industry, facilitated by an increasing number of fly-in/fly-out arrangements, income levels are expected to rise, creating the conditions for private housing development. Lot availability and construction capacity remains an issue, at least in the short term. Housing development will also be spurred on by the ACFN plan to develop an urban reserve in the Hamlet, although there are concerns regarding a 'checkerboard' effect of parcel ownership. There are also concerns whether current First Nations housing programs can meet future demand arising from natural population growth combined with returning community members.

The development of the housing market in Fort Chipewyan is linked to the fly-in/fly-out opportunities that will allow community members to work in the oil sands industry while remaining in the community. Relative to moving to Fort McMurray for employment, the development of a housing market and work commute system allows community members to remain in their home community, avoid the high housing costs in Fort McMurray, and have more opportunity to pursue traditional pursuits.

Table 4.8 Summary of Issues by Aboriginal Group: Housing

All Groups	ACFN Members on Reserve and in Fort Chipewyan	MCFN Members on Reserve and in Fort Chipewyan	Métis Members in Fort Chipewyan	FMFN Members in Fort McKay	Métis Members in Fort McKay	FMcFN Members on Reserve	FMcFN and Other Aboriginal Group Members in Fort McMurray
• Housing issues exist throughout the region. In the urban service area, many Aboriginal residents, especially those with lower incomes, are negatively affected by the high housing cost environment. In rural areas and on reserves, there are concerns with the quality of the current housing stock and the ability of Aboriginal housing programs to address these concerns and meet the future needs of their community (e.g., limited funding, relatively higher costs for building materials, etc.).	• The ACFN's housing program focuses on properties within the Hamlet of Fort Chipewyan and builds between two and four new housing units a year. The ACFN housing program also has a waiting list. The ACFN have flagged the availability of land on which to build as a constraint for future housing construction. The ACFN is exploring the idea of an urban reserve on residential lots located within the Hamlet. • The ACFN housing program is constrained by limited funding, relatively higher costs for building materials, and limited technical oversight and community construction capacity (e.g., lack of skilled workers).	• The MCFN has housing on the Dog Head and Allison Bay reserves near Fort Chipewyan and builds between two and four new housing units a year. The MCFN housing program has a waiting list. • The MCFN housing program is constrained by limited funding, relatively higher costs for building materials, and limited technical oversight and community construction capacity (e.g., lack of skilled workers). • An estimated 60% and 67% of dwellings require major or minor repair in Fort Chipewyan and on Wood Buffalo reserves, respectively. This is higher than the provincial average of 34% of housing units requiring repair, but comparable to or lower than in many other Aboriginal communities in northern Alberta.	• Housing for Métis in Fort Chipewyan is a concern. Métis Local 125 has limited resources to support a housing program and most Métis live in privately-owned housing in the community. • An estimated 60% of dwellings require major or minor repair in Fort Chipewyan. This is higher than the provincial average of 34% of housing units requiring repair, but comparable to or lower than in many other Aboriginal communities in northern Alberta. • Overcrowded housing has been raised by Aboriginal residents in the region. Fort Chipewyan have a housing density of 0.5 persons per room, lower than for many other northern reserves.	• The FMFN has an active housing program and the housing stock in Fort McKay has received large-scale investment. There are currently 13 houses under construction and the FMFN have long-range plans to build up to 25 houses per year until housing needs are met. As of spring 2013, there were approximately 74 people on the waiting list. • An estimated 50% of dwellings require major or minor repair in Fort McKay. This is higher than the provincial average of 34% of housing units requiring repair, but lower than in many other Aboriginal communities in northern Alberta. • Overcrowded housing has been raised by Aboriginal residents in the region. Fort McKay has a housing density of 0.5 persons per room, lower than for many other northern reserves.	• The quality and needed supply of housing stock for Métis in Fort McKay lags that of the FMFN. The Métis Local 63 has plans to develop its first housing project for members, a four-unit development, starting in the summer of 2013. Potential funding for this housing program may come from profits generated by Métis Local-owned companies. • An estimated 50% of dwellings require major or minor repair in Fort McKay. This is higher than the provincial average of 34% of housing units requiring repair, but lower than in many other Aboriginal communities in northern Alberta. • Overcrowded housing has been raised by Aboriginal residents in the region. Fort McKay has a housing density of 0.5 persons per room, lower than for many other northern reserves.	• On-reserve housing is delivered mostly by the First Nations with financial assistance from AANDC and the Canada Mortgage and Housing Corporation (CMHC). • On reserves, there are concerns with the quality of the current housing stock and the ability of Aboriginal housing programs to address these concerns and meet the future needs of their community (e.g., limited funding, relatively higher costs for building materials, etc.). • An estimated 67% of dwellings require major or minor repair on select Wood Buffalo reserves. This is higher than the provincial average of 34% of housing units requiring repair, but lower than in many other Aboriginal communities in northern Alberta.	• Fort McMurray has a high-cost housing environment, with the highest average rental rates and house prices in the province. The average single detached house sale price in 2012 was $751,000, while one-bedroom apartment rents were averaging $1,650 per month. • High housing costs affect the entire population, but for Aboriginal residents, who tend to have lower income levels, the effect is felt more acutely. • When individuals in rural communities exhaust their local family and support networks, they tend to migrate to the urban centre where emergency shelters, transitional housing and other housing and support options are concentrated.

Table 4.8 Summary of Issues by Aboriginal Group: Housing (continued)

All Groups	ACFN Members on Reserve and in Fort Chipewyan	MCFN Members on Reserve and in Fort Chipewyan	Métis Members in Fort Chipewyan	FMFN Members in Fort McKay	Métis Members in Fort McKay	FMcFN Members on Reserve	FMcFN and Other Aboriginal Group Members in Fort McMurray
	• An estimated 60% and 67% of dwellings require major or minor repair in Fort Chipewyan and on select Wood Buffalo reserves, respectively. This is higher than the provincial average of 34% of housing units requiring repair, but comparable to or lower than in many other Aboriginal communities in northern Alberta. • Overcrowded housing has been raised by Aboriginal residents in the region. Fort Chipewyan and select Wood Buffalo reserves have a housing density of 0.5 and 0.6 persons per room, respectively. This is comparable to or lower than for many other northern reserves.	• Overcrowded housing has been raised by Aboriginal residents in the region. Fort Chipewyan and select Wood Buffalo reserves have a housing density of 0.5 and 0.6 persons per room, respectively. This is comparable to or lower than for many other northern reserves. • A private housing market exists in Fort Chipewyan, albeit limited in formal transactions, reflecting the community's isolation, relatively small size, limited incomes and presence of Band housing programs. The market for private housing is emerging as more community members become engaged in industrial activity, supported by the fly-in/fly-out operation of oil sands developers and the development of the Aboriginal businesses. • The Municipality owns a number of lots in the hamlet and is examining a variety of options for increasing the number of private lots available to residents.	• A private housing market exists in Fort Chipewyan, albeit limited in formal transactions, reflecting the community's isolation, relatively small size, limited incomes and presence of Band housing programs. The market for private housing is emerging as more community members become engaged in industrial activity, supported by the fly-in/fly-out operation of oil sands developers and the development of the Aboriginal businesses. • The Municipality owns a number of lots in the hamlet and is examining a variety of options for increasing the number of private lots available to residents. • Homelessness also exists in Fort Chipewyan and tends to manifest itself as individuals staying with family and friends.	• There is limited or no private market for housing in Fort McKay, as all housing stock is either band-owned or on land leased by the Métis local. • Homelessness also exists in Fort McKay and tends to manifest itself as individuals staying with family and friends.	• There is limited or no private market for housing in Fort McKay, as all housing stock is either band-owned or on land leased by the Métis local. • Homelessness also exists in Fort McKay and tends to manifest itself as individuals staying with family and friends.	• Overcrowded housing has been raised by Aboriginal residents in the region. Select Wood Buffalo reserves have a housing density of 0.6 persons per room, comparable to or lower than for many other northern reserves.	• Métis Urban Housing Corporation, a fully owned board-governed affiliate of the Métis Nation of Alberta, has 10 units in Fort McMurray. These non-market housing units are available to both Métis and other Aboriginal persons and families. • Homelessness is an issue in the region, due to the high housing costs and in-migration of people from outside the region, many of whom have limited or no local support networks. • The RMWB has a 10-year plan to end homelessness, which identified roughly one-quarter of the 550 homeless population in 2008 to be Aboriginal. By 2010 the homeless population had decreased significantly to about 320, with roughly one-third identified as Aboriginal. Those numbers remain virtually unchanged in 2012.

Table 4.8 Summary of Issues by Aboriginal Group: Housing (continued)

All Groups	ACFN Members on Reserve and in Fort Chipewyan	MCFN Members on Reserve and in Fort Chipewyan	Métis Members in Fort Chipewyan	FMFN Members in Fort McKay	Métis Members in Fort McKay	FMcFN Members on Reserve	FMcFN and Other Aboriginal Group Members in Fort McMurray
	• A private housing market exists in Fort Chipewyan, albeit limited in formal transactions, reflecting the community's isolation, relatively small size, limited incomes and presence of Band housing programs. The market for private housing is emerging as more community members become engaged in industrial activity, supported by the fly-in/fly-out operation of oil sands developers and the development of the Aboriginal businesses. • The Municipality owns a number of lots in the hamlet and is examining a variety of options for increasing the number of private lots available to residents. • Homelessness also exists in Fort Chipewyan and tends to manifest itself as individuals staying with family and friends.	• Homelessness also exists in Fort Chipewyan and tends to manifest itself as individuals staying with family and friends.					

4.5 Education

4.5.1 Situation Analysis

4.5.1.1 Introduction

The following section provides information on:

- the education attainment levels for the Aboriginal identity population in the study area,
- overview of current education services in Fort McMurray, Fort McKay and Fort Chipewyan,
- Aboriginal student performance in the area, and
- an overview of issues that have been flagged as affecting education outcomes for Aboriginal students in the region.

Table 4.11 provides a summary of information by individual Aboriginal group, to the extent possible.

4.5.1.2 Education Attainment Levels

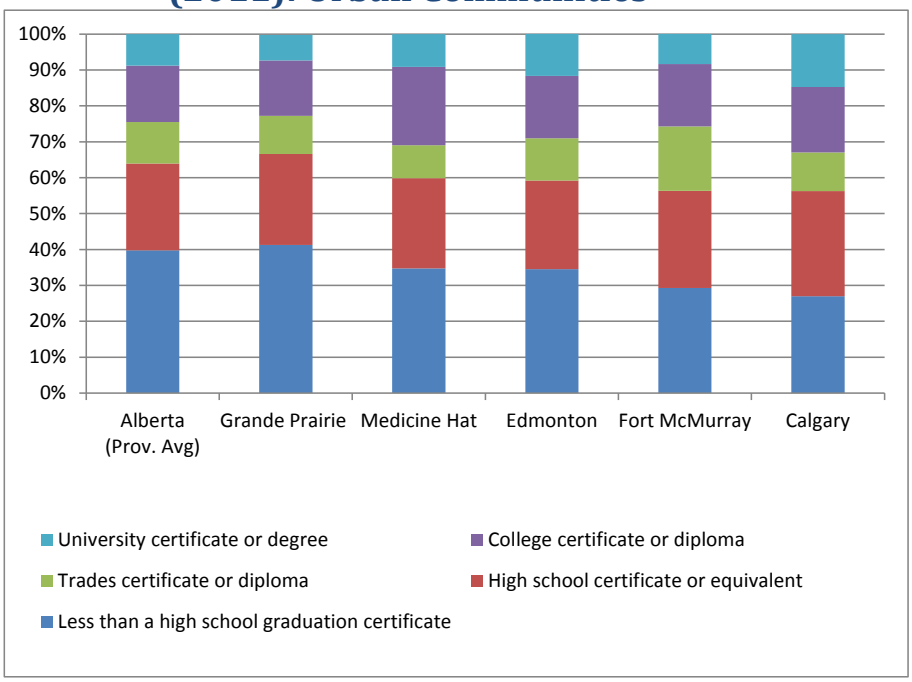
Figure 4.12 provides a breakdown of education attainment levels for the Aboriginal identity population in Fort McMurray and other urban centres in Alberta. The data shows that, as compared to other urban centres, the proportion of the Aboriginal identity population in Fort McMurray with:

- a high school diploma or equivalent is comparable or higher;
- a trades certificate or diploma is higher;
- a college certificate or diploma is comparable;
- a university certificate, diploma or degree is lower.

The higher trades and lower university accreditation in the Aboriginal identity population is reflected in the non-Aboriginal population. It also reflects the labour force requirements in the area that are biased towards trades-related skills.

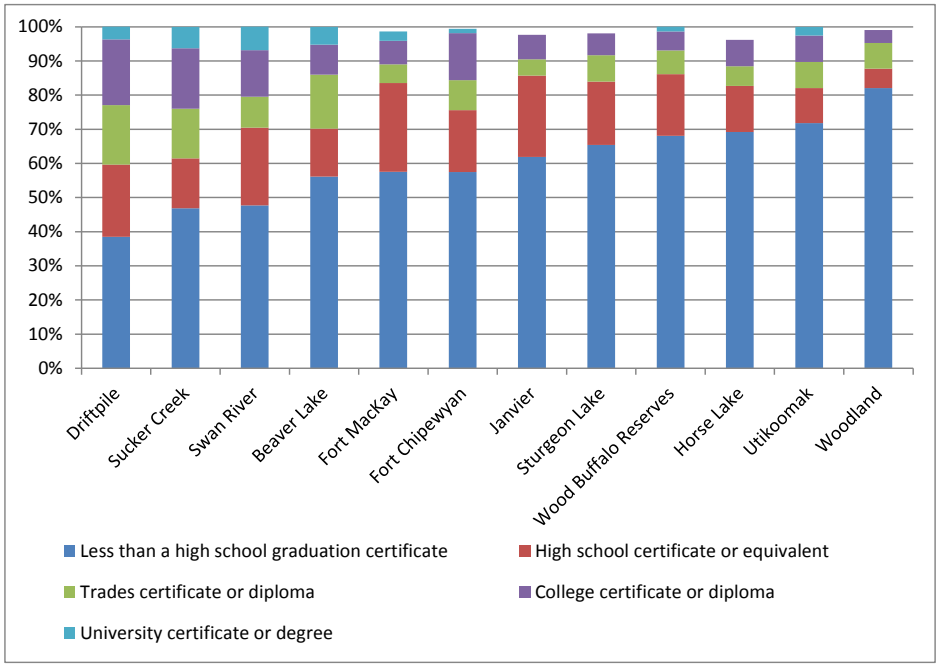
Figure 4.13 provides a comparison of educational attainment levels for the Aboriginal identity population in rural communities and reserves near or north of Fort McMurray to other Treaty 8 communities in Alberta. This data shows that the Aboriginal population in Fort McKay, Fort Chipewyan and select Wood Buffalo reserves has comparable education attainment levels to many other Treaty 8 communities in Alberta.

Figure 4.12 Education Attainment Levels for the Aboriginal Identity Population 15 Years of age and Over (2011): Urban Communities



Source: Statistics Canada. 2013. 2011 National Household Survey

Figure 4.13 Education Attainment Levels for the Aboriginal Identity Population 15 Years and Over (2011): Rural Communities



Source: Statistics Canada. 2013. 2011 National Household Survey
Note: Wood Buffalo Reserves includes the reserve communities of the MCFN, ACFN, and FMcFN.
Note: Totals might not add to 100% due to rounding or data suppression.

Although the education attainment levels of the Aboriginal identity population in the area compare with other Aboriginal communities, they continue to lag behind the non-Aboriginal population.

4.5.1.3 Service Delivery

Table 4.9 provides an overview of current education services in Fort McMurray, Fort McKay and Fort Chipewyan. Most services offered are open to all members of the community, regardless of First Nation membership or Métis association.

Table 4.9 Current Education Services

Fort McMurray	Fort McKay	Fort Chipewyan
• The Fort McMurray Public School District provides kindergarten to Grade 12 instruction and offers a number of specialized programs including Early Childhood Development, Advanced Placement, Early Intervention, and high school French Immersion. The board operates 13 schools and has an enrolment of about 5,380 students as of the 2011/2012 school year. • The Fort McMurray Catholic School District also provides kindergarten to Grade 12 instruction and offers a number of specialized programs including First Nations Métis Inuit studies. The board serves over 4,800 students and operates 10 schools. • Post-secondary education services are provided by Keyano College with learning centres in other communities within the RMWB. The college delivers programs with a focus on trades training, academic foundation programs, and other adult learning courses. Aboriginal Education at Keyano College offers the Aboriginal Entrepreneurship program, Professional Drivers Improvement Course, Syncrude Aboriginal Trades Preparation Program, and a Diploma program in Supply Management.	• The Fort McKay School, which is part of the Northlands School Division No. 61, provides kindergarten to Grade 9 instruction to about 85 students in the community. High school students either attend schools in Fort McMurray or pursue distance education through the E-learning program in the community. • A Head Start Program is also offered in the community for pre-school children. • Keyano College also operates a learning centre in the community (Dorothy McDonald Learning Centre). The centre provides academic foundation programs to upgrade basic skills up to a grade nine level. It also provides college preparation courses to qualifying students.	• The Athabasca Delta Community School, which is part of the Northlands School Division No. 61, provides kindergarten to Grade 12 instruction to about 300 students in the community. Junior and senior students can also enrol in industrial arts, home economics and food studies, and computer courses. • Plans are underway in Fort Chipewyan to explore the introduction of the StartSmart program at the Athabasca Delta Community School (OSLI 2013). • The Lake Athabasca Youth Council (LAYC) has been established to provide support to the community's youth. • Although present in the community for many years, Keyano opened a new 800m^2 campus in Fort Chipewyan in 2011. Industry donors for the campus included Shell, Total E&P, Enbridge, and Imperial Oil. The Fort Chipewyan campus offers credited adult upgrading programs, as well as access to distance education learning opportunities. • The education department of the MCFN operates the Post Secondary Student Support Program (PSSSP). This program provides funding to eligible students to attend education or academic upgrading after completion of public school (MCFN 2009d).

According to Accountability Pillar Survey results from Alberta Education, 79% of teachers, parents and students surveyed in the Northlands School Division, which serves the communities of Fort McKay and Fort Chipewyan, were satisfied with the overall quality of basic education (AE 2012). This is lower than 87% and 88% in the Fort McMurray public and separate school systems, and a provincial average of 89%.

Concerns have been raised about persistently weak student learning outcomes in the Northlands School Division and other matters relating to the governance of the jurisdiction. In early 2010 the Minister of Education dismissed the Northland School Division Board and convened the Northland School Division Inquiry Team (NSD 2010). In early 2011, a Community Engagement Team was appointed to provide feedback on the Inquiry Report recommendations and offer strategic advice, direction and leadership in the development of a community engagement blueprint (NSD 2011). A new Superintendent and team are currently implementing 48 recommendations from the review. According to the Division, results are being achieved, albeit slowly. The Minister of Education will decide in the fall of 2013 the next steps for the Division (Barrett 2013, pers. comm.).

The delivery of education services in Fort McKay and Fort Chipewyan has a number of challenges including:

- limited programming due to small school population;
- aging school infrastructure; and
- difficulty in attracting and retaining quality educators (e.g., isolated community, relatively high cost of living).

Supplemental information submitted by the ACFN for the Shell JME hearing in 2012 also highlighted community concerns with the quality of the education in Fort Chipewyan stemming from:

- low expectations of teachers and lack of discipline/structure in the school;
- insufficient preparation of primarily young and inexperienced staff to teach in the province's small, northern schools;
- too few Aboriginal teachers; and
- promoting children to the next grade before they are academically ready (MacDonald 2012, drawing on interviews and focus groups and Taylor 2009).

In Fort Chipewyan, teacher retention has seen a marked improvement, in part linked to the increase in project-based experiential learning initiatives being undertaken by the school and Division (Flieger, 2013).

For the urban school boards, staff turnover, although lower than levels experienced in previous years, remains an issue. School boards regularly lose teaching and support staff to the private sector (FMPSD 2010, 2012; FMCSD 2011, 2012). The cost of housing continues to be a challenge in attempting to attract and retain staff (Mankowski 2013, pers. comm.).

Similarly to other public services, there is a need for more holistic, culturally-sensitive programming in education to improve outcomes for Aboriginal students. The Fort McMurray Catholic School Board offers First Nations Métis Inuit studies and Keyano College offers programs and courses under Aboriginal Education. In Fort Chipewyan, new experiential-based learning programs, including facilitation of traditional land knowledge transfer from elders to youth, are showing encouraging results in student motivation, and community member engagement (Flieger 2013, pers. comm.).

The need for Aboriginal language retention programs has also been identified in the region. Based on Statistics Canada Aboriginal Population Profile data, the knowledge and use of Aboriginal language by Aboriginal peoples in rural areas of the region is comparable or somewhat lower than in other Aboriginal communities in northern Alberta (StatsCan 2007). The loss of Aboriginal languages is a concern for Aboriginal communities across Canada. It is dependent upon a number of factors, including increasing exposure to the non-Aboriginal population and exposure to English through the school system, the workplace, and other mediums (e.g., television, films and the internet). Finding ways to frame learning experiences within an Aboriginal context and to facilitate the transfer of traditional knowledge, including language, from Elders to young people is an important consideration for the education system.

Education offerings have been growing in recent years and industry has become an influential player in supporting education infrastructure and programming in the region, including for Aboriginal students. Industry has funded early literacy and high school programs, language retention programs, as well as provided financial assistance to Aboriginal students pursuing post-secondary education.

4.5.1.4 Aboriginal Student Performance

Table 4.10 provides Accountability Pillar Survey results for Aboriginal students in the region as compared to the provincial averages for Aboriginal students and all students. The results show that:

- Aboriginal students in Fort McMurray generally have better results than the provincial average for Aboriginal students, but poorer results as compared to the provincial average for all students.

- Aboriginal students in the Northland School Division, which includes schools in Fort McKay and Fort Chipewyan, have poorer results than Aboriginal students in

Fort McMurray and poorer results than the provincial average for all Aboriginal students.

Table 4.10 provides results based on a three-year average. Both the Fort McMurray Public and Catholic school divisions have reported significant gains in recent years in reducing First Nation, Métis and Inuit (FNMI) dropout rates and increasing FNMI high school completion rates.

Table 4.10 Accountability Pillar Survey Results (Three-Year Average)

Measure	FMCSD[1]	FMPSD[2]	NSD[3, 4]	Alberta Average	Alberta Average
	Aboriginal Students (%)				All Students (%)
Drop Out Rate	4.9	9.5	15.4	10.9	4.4
High School Completion Rate (3 year)	58.3	52.8	15.8	36.0	71.6
Provincial Achievement Test Results (Grades K-9) (Acceptable or Excellent)	87.9	79.9	43.2	63.7	98.0

Sources: FMCSD 2012, FMPSD 2012, NSD 2012.

Notes: 1. Fort McMurray Catholic Schools; 2. Fort McMurray Public School Board; 3. Northlands School Division; 4 Northland School Division No. 61 offers educational services to primarily First Nation and Métis students in twenty-three (23) schools located throughout the northern half of Alberta, including in Fort McKay and Fort Chipewyan.

4.5.1.5 Issues

A number of issues have been flagged as affecting education outcomes for Aboriginal students in the region.

- Family stresses – whether the result of alcohol and drugs, work demands, or the legacy of residential schools – can contribute to lower parental involvement in their child's education and the absence of strong support networks within the community.[7] Addictions issues among Aboriginal youth themselves also affect their engagement in and success with educational opportunities. These issues are common across Aboriginal groups in the region, regardless of First Nation membership or Métis association, and are shared with Aboriginal groups elsewhere.

- Transitioning from a rural to urban setting in order to access education and training. Aboriginal students access education and training services in Fort

[7] Convincing parents to increase their involvement in their children's education was one of two obstacles to student success identified by a former principal of the Athabasca Delta Community School (ADCS). The other obstacle was keeping good teachers at the school for extended periods of time (NORJ 2010).

McMurray often because these services are not available in their home community or in some instances because of a concern with the quality of the education available in their home community (Taylor 2010). This transition often creates challenges for students, especially young students, such as:

- dealing with a new environment (e.g. larger school, larger community), which is largely non-Aboriginal;
- being disconnected from their family and support network;
- facing discrimination; and
- for Fort McKay students who commute on a daily basis, long days on the bus with little opportunity to engage in after-school activities.

These challenges lead many Aboriginal youth to drop out before completing high school. The challenge of accessing quality education and training in small, rural communities is shared with other Aboriginal communities in the province (Taylor 2010).

- Uneven access to funding sources across Aboriginal groups. For example, Métis students are not eligible for the federal government's Post Secondary Student Support Program (Taylor 2009, 2010).
- The relatively high cost of living has been flagged as an issue for Aboriginal youth interested in accessing education and training opportunities (MacDonald 2012).
- Barriers to educational funding, affordable daycare, and adequate family support is a challenge for young Aboriginal parents, especially single mothers, who may be considering pursuing further educational opportunities.
- The availability of industry-related employment points out the importance of education, especially high school. Between 2005 and 2008, about 40% of the Aboriginal students at Keyano College were enrolled in upgrading programs (Taylor 2010). However, there still appears to be less focus on post-secondary studies and a lack of career development opportunities for Aboriginal youth, especially in fields of study that are not industry-related (Taylor 2009).

4.5.2 Effects Assessment

4.5.2.1 Project Effects

The effect of Shell's PRM project on local education services and infrastructure will largely follow population effects, falling on the urban service area. The project will not be a sizeable driver of demand for education services. The Project will expand the employment and contracting opportunities for Fort McKay and Fort Chipewyan

community members and companies. Some of these opportunities may be taken up by currently unemployed community members and youths as they look to enter the workforce. This expansion of employment opportunities may drive increased demand for local education services and infrastructure in these communities.

Shell will continue to assess and support, where warranted, the following initiatives to assist in the further education of Aboriginal youth in the area:

- providing ongoing support for E-learning in Fort McKay;
- Keyano College, through financial donations (e.g., in 2010, Shell announced a $2 million investment to support specific Aboriginal, environmental, and technical training programs, a new centre to conduct contractor safety training, and a new Fort Chipewyan campus which opened in 2011 (CEAA 2012));
- supporting environmental education of Aboriginal students in the region through annual scholarships (e.g., ACFN Scholarships fund), funding for environmental training and opportunities for graduates of environmental programs;
- providing funding to bring Science and Technology camps and workshops to Fort Chipewyan and Fort McKay;
- supporting the Shell Teacher Placement Program through the University of Alberta which will place student teachers in rural schools in the RMWB; and
- supporting other Aboriginal education initiatives identified by schools in Fort Chipewyan, Fort McKay and Fort McMurray.

A recent example of Shell's support for education is the $1 million contribution by Shell Albian Sands to the Science and Technology Centre at the Father Mercredi Community High School in Fort McMurray, which will benefit both Aboriginal and non-Aboriginal students.

With respect to language, the Project may contribute to the reduced use of Aboriginal language in the region. However, change in the knowledge and use of Aboriginal languages has been ongoing for some time, and is expected to continue irrespective of the Project. Industrial operators, including Shell, have attempted to mitigate some of these effects by supporting language retention and promotion initiatives.

The information on education does not allow for differentiation among First Nations and other Aboriginal groups. Most of Shell's education initiatives are not limited to any one First Nation or Aboriginal Group. Even those initiatives that have a defined geographical reach, such as its support of E-learning in Fort McKay, benefit both FMFN and Métis community members. Others, such as support for Keyano College and Father Mercredi

Community High School have the potential to benefit Aboriginal and non-Aboriginal students alike. More generally, education services are delivered at the community level and by means of school boards and post-secondary institutions that serve both Aboriginal and non-Aboriginal students.

4.5.2.2 Future Development

Current and planned development in the oil sands industry will expand employment opportunities and, in turn, drive a continued focus on educating and employing local Aboriginal peoples. It will likely also drive continued industry support for educational initiatives in the region.

Many Aboriginal residents will face barriers in accessing adequate education services, as outlined in Section 4.5.1.4. In some cases, increased industrial development may indirectly contribute to these barriers (e.g., family stressors related to work demands, a relatively heavier emphasis on high school as opposed to post-secondary studies).

Responsibility for addressing the educational needs of Aboriginal youth in the region largely falls within the mandate of public agencies such as the Northlands School Division, Fort McMurray Public School Board, Fort McMurray Catholic School Board, and Keyano College. Industry's ongoing support for education and training will likely be driven by workforce needs as well as ongoing engagement with local Aboriginal groups and education service providers.

Population growth assumed under the 2013 PDC will increase demand for education infrastructure and services in the region, requiring additional facilities, programming and staffing. These effects will fall largely on the urban service area. Service providers are in a better position to deal with increased growth than in previous years largely as a result of additional resources being made available and planning being carried out, including the construction of additional infrastructure. These planning initiatives need to be properly resourced and carried out in a timely manner so as to avoid pressures associated with growth.

Table 4.11 Summary of Issues by Aboriginal Group: Education

All Groups	ACFN Members on Reserve and in Fort Chipewyan	MCFN Members on Reserve and in Fort Chipewyan	Métis Members in Fort Chipewyan	FMFN Members in Fort McKay	Métis Members in Fort McKay	FMcFN Members on Reserve	FMcFN and Other Aboriginal Group Members in Fort McMurray
• Although the education attainment levels of the Aboriginal identity population are comparable to other Aboriginal communities, they continue to lag behind the non-Aboriginal population. • Family stresses – whether the result of alcohol and drugs, work demands, or the legacy of residential schools – affect education outcomes for Aboriginal students in the region. These stresses can contribute to lower parental involvement in a child's education and the absence of strong support networks within the community. • There is a need for more holistic, culturally-sensitive programming in education to improve outcomes for Aboriginal students. • Industry has become an influential player in supporting education infrastructure and programming in the region.	• The Aboriginal population in Fort Chipewyan and on select Wood Buffalo reserves has comparable education attainment levels to other Treaty 8 communities in Alberta. • Seventy-nine percent of teachers, parents and students surveyed in the Northlands School Division, which serves the communities of Fort McKay and Fort Chipewyan, were satisfied with the overall quality of basic education. This compares to a provincial average of 89%. Concerns have been raised about persistently weak student learning outcomes in the Northlands School Division and other matters relating to the governance of the jurisdiction. • The delivery of education services in rural communities has a number of challenges including: limited programming; aging school infrastructure; and difficulty in attracting and retaining quality educators.	• The Aboriginal population in Fort Chipewyan and select Wood Buffalo reserves has comparable education attainment levels to other Treaty 8 communities in Alberta. • Seventy-nine percent of teachers, parents and students surveyed in the Northlands School Division, which serves the communities of Fort McKay and Fort Chipewyan, were satisfied with the overall quality of basic education. This compares to a provincial average of 89%. Concerns have been raised about persistently weak student learning outcomes in the Northlands School Division and other matters relating to the governance of the jurisdiction. • The delivery of education services in rural communities has a number of challenges including: limited programming; aging school infrastructure; and difficulty in attracting and retaining quality educators.	• The Aboriginal population in Fort Chipewyan has comparable education attainment levels to other Treaty 8 communities in Alberta. • Seventy-nine percent of teachers, parents and students surveyed in the Northlands School Division, which serves the communities of Fort McKay and Fort Chipewyan, were satisfied with the overall quality of basic education. This compares to a provincial average of 89%. Concerns have been raised about persistently weak student learning outcomes in the Northlands School Division and other matters relating to the governance of the jurisdiction. • The delivery of education services in rural communities has a number of challenges including: limited programming; aging school infrastructure; and difficulty in attracting and retaining quality educators.	• The Aboriginal population in Fort McKay has comparable education attainment levels to other Treaty 8 communities in Alberta. • Seventy-nine percent of teachers, parents and students surveyed in the Northlands School Division, which serves the communities of Fort McKay and Fort Chipewyan, were satisfied with the overall quality of basic education. This compares to a provincial average of 89%. Concerns have been raised about persistently weak student learning outcomes in the Northlands School Division and other matters relating to the governance of the jurisdiction. • The delivery of education services in rural communities has a number of challenges including: limited programming; aging school infrastructure; and difficulty in attracting and retaining quality educators.	• The Aboriginal population in Fort McKay has comparable education attainment levels to other Treaty 8 communities in Alberta. • Seventy-nine percent of teachers, parents and students surveyed in the Northlands School Division, which serves the communities of Fort McKay and Fort Chipewyan, were satisfied with the overall quality of basic education. This compares to a provincial average of 89%. Concerns have been raised about persistently weak student learning outcomes in the Northlands School Division and other matters relating to the governance of the jurisdiction. • The delivery of education services in rural communities has a number of challenges including: limited programming; aging school infrastructure; and difficulty in attracting and retaining quality educators.	• The Aboriginal population on select Wood Buffalo reserves has comparable education attainment levels to other Treaty 8 communities in Alberta. • Seventy-nine percent of teachers, parents and students surveyed in the Northlands School Division, which serves rural communities in the Wood Buffalo region, were satisfied with the overall quality of basic education. This compares to a provincial average of 89%. Concerns have been raised about persistently weak student learning outcomes in the Northlands School Division and other matters relating to the governance of the jurisdiction. • The delivery of education services in rural communities has a number of challenges including: limited programming; aging school infrastructure; and difficulty in attracting and retaining quality educators.	• As compared to other urban centres, the proportion of the Aboriginal identity population in Fort McMurray with: a high school diploma or equivalent is comparable; a trades certificate or diploma is higher; a university certificate, diploma or degree is comparable or lower. • In the Fort McMurray public and separate school systems, 87% and 88% of surveyed teachers, parents and students were satisfied with the overall quality of basic education. This compares to a provincial average of 89%. • For the urban school boards, staff turnover, although lower than levels experienced in previous years, remains an issue. The cost of housing continues to be a challenge in attempting to attract and retain staff.

Table 4.11 Summary of Issues by Aboriginal Group: Education (continued)

All Groups	ACFN Members on Reserve and in Fort Chipewyan	MCFN Members on Reserve and in Fort Chipewyan	Métis Members in Fort Chipewyan	FMFN Members in Fort McKay	Métis Members in Fort McKay	FMcFN Members on Reserve	FMcFN and Other Aboriginal Group Members in Fort McMurray
• For Aboriginal youth in the region, there still appears to be an insufficient focus on post-secondary studies and a lack of career development opportunities, especially in fields of study that are not industry-related.	• Additional concerns expressed by ACFN members with the quality of the education in Fort Chipewyan include: low expectations of teachers and lack of discipline/ structure in the school; insufficient preparation of primarily young and inexperienced staff to teach in the province's small, northern schools; and promoting children to the next grade before they are academically ready. • Aboriginal students in the Northland School Division have poorer results than Aboriginal students in Fort McMurray and poorer results than the provincial average for all Aboriginal students. • The high cost of living has been flagged as an issue for Aboriginal youth interested in relocating to Fort McMurray in order to access education and training opportunities. • Barriers to educational funding, affordable daycare, and adequate family support is a challenge for young Aboriginal parents, especially single mothers, who may be considering pursuing further educational opportunities. • Transitioning from a rural to urban setting, in order to access education and training, creates a number of challenges for students including: dealing with a new environment, which is largely non-Aboriginal; being disconnected from their family and support network; and facing discrimination.	• Aboriginal students in the Northland School Division have poorer results than Aboriginal students in Fort McMurray and poorer results than the provincial average for all Aboriginal students. • The high cost of living has been flagged as an issue for Aboriginal youth interested in relocating to Fort McMurray in order to access education and training opportunities. • Barriers to educational funding, affordable daycare, and adequate family support is a challenge for young Aboriginal parents, especially single mothers, who may be considering pursuing further educational opportunities. • Transitioning from a rural to urban setting, in order to access education and training, creates a number of challenges for students including: dealing with a new environment, which is largely non-Aboriginal; being disconnected from their family and support network; and facing discrimination.	• Aboriginal students in the Northland School Division have poorer results than Aboriginal students in Fort McMurray and poorer results than the provincial average for all Aboriginal students. • There is uneven access to funding sources across Aboriginal groups. For example, Métis students are not eligible for the federal government's Post Secondary Student Support Program. • Barriers to educational funding, affordable daycare, and adequate family support is a challenge for young Aboriginal parents, especially single mothers, who may be considering pursuing further educational opportunities. • Transitioning from a rural to urban setting, in order to access education and training, creates a number of challenges for students including: dealing with a new environment, which is largely non-Aboriginal; being disconnected from their family and support network; and facing discrimination.	• Aboriginal students in the Northland School Division have poorer results than Aboriginal students in Fort McMurray and poorer results than the provincial average for all Aboriginal students. • Barriers to educational funding, affordable daycare, and adequate family support is a challenge for young Aboriginal parents, especially single mothers, who may be considering pursuing further educational opportunities. • Transitioning from a rural to urban setting, in order to access education and training, creates a number of challenges for students including: dealing with a new environment, which is largely non-Aboriginal; being disconnected from their family and support network; and facing discrimination. • For Fort McKay students who commute on a daily basis to Fort McMurray, long days on the bus leave them with little opportunity to engage in after-school activities.	• Aboriginal students in the Northland School Division have poorer results than Aboriginal students in Fort McMurray and poorer results than the provincial average for all Aboriginal students. • There is uneven access to funding sources across Aboriginal groups. For example, Métis students are not eligible for the federal government's Post Secondary Student Support Program. • Barriers to educational funding, affordable daycare, and adequate family support is a challenge for young Aboriginal parents, especially single mothers, who may be considering pursuing further educational opportunities. • Transitioning from a rural to urban setting, in order to access education and training, creates a number of challenges for students including: dealing with a new environment, which is largely non-Aboriginal; being disconnected from their family and support network; and facing discrimination. • For Fort McKay students who commute on a daily basis to Fort McMurray, long days on the bus leave them with little opportunity to engage in after-school activities.	• Aboriginal students in the Northland School Division have poorer results than Aboriginal students in Fort McMurray and poorer results than the provincial average for all Aboriginal students. • Barriers to educational funding, affordable daycare, and adequate family support is a challenge for young Aboriginal parents, especially single mothers, who may be considering pursuing further educational opportunities. • Transitioning from a rural to urban setting, in order to access education and training, creates a number of challenges for students including: dealing with a new environment, which is largely non-Aboriginal; being disconnected from their family and support network; and facing discrimination.	• Aboriginal students in Fort McMurray generally have better results than the provincial average for Aboriginal students, but poorer results as compared to the provincial average for all students. • Barriers to educational funding, affordable daycare, and adequate family support is a challenge for young Aboriginal parents, especially single mothers, who may be considering pursuing further educational opportunities.

4.6 Public Safety and Protective Services

4.6.1 Situation Analysis

Aboriginal groups in the region have raised the following concerns with regards to public safety:

- The presence of alcohol and drugs in their communities and associated alcohol- and drug-related offences. Improvements in the region's transportation network and the increased presence of non-Aboriginals are seen to be providing greater access to alcohol and drugs. As noted in Section 4.3.1.2, the availability and abuse of alcohol and drugs is seen as a major contributing factor to other social issues.

- Traffic safety, especially along Highway 63. Traffic safety concerns take on a special importance for people living in outlying communities, because community members use Highway 63 to travel to and from Fort McMurray for access to services and amenities. For Fort McKay, these concerns are driven by the fact that some Fort McKay high school students use the highway twice daily to attend school in Fort McMurray and other community members use the highway to go to Fort McMurray for medical, shopping, and recreational needs.

- The increased regional population and large number of people in nearby work camps causes additional stress among residents and affects their sense of safety and well-being, including when out on the land (e.g., hunting, fishing, trapping).

Police services in the area are provided by the Royal Canadian Mounted Police (RCMP). The Fort McMurray RCMP detachment covers the urban service area and Fort McKay. The detachment has received additional resources in recent years, including a new headquarters in Fort McMurray, and a regular member count of 211, up 31% from 2009. A number of the detachment's officers are Aboriginal (Durance 2013, pers. comm.). There are four policing positions dedicated to Fort McKay, three of which are paid for under special funding arrangements with industry (enhanced policing).

Fort Chipewyan has its own RCMP detachment with five regular members, including one Aboriginal policing position. Availability of housing and detachment space is an issue for the detachment (Klenk 2013, pers. comm.).

According to the detachment in Fort McMurray, criminal activity in the region declined between 2009 and 2012. In Fort McKay domestic violence and substance abuse-related issues tend to be the majority of police calls (Durance 2012, pers. comm.).

According to the Fort Chipewyan detachment there are minimal day-to-day policing requirements in the community. The majority of calls relate to substance abuse and

activities linked to a small group of residents. According to the detachment, the crime rate has been decreasing in the community over the past four years, which is attributed to increased police work and strong collaboration efforts within the community to address issues (Klenk 2013, pers. comm.).

The RCMP do not track criminal activity by individual First Nations or Métis membership, and neither detachment reports any noticeable difference between these populations (Durance, Klenk, pers. comm. 2013).

RCMP priorities in the area include:

- traffic-related issues;
- organized crime and gangs;
- property theft;
- safety of citizens in the downtown core; and
- police-community relations in rural areas.

With respect to this last priority, the RCMP is working to build relationships with community residents in Fort McKay and Fort Chipewyan. School and community activity visits are a priority for both detachments and Aboriginal leaders are working with the RCMP on engagement and priority areas (RCMP 2012a). As an example, the Wellness Center in Fort McKay is working in partnership with the Fort McMurray RCMP and Shell Canada on the RCMP's Positive Ticketing Program, which recognizes and promotes positive behaviors and actions of children and youth in the community (FMFN 2012b).

Oil sands development affects public safety and policing in a number of ways, including:

- increasing the resident population in the urban area, which places additional demands on local policing;
- increasing the camp-based population in the region which can place increased demands on regional policing and raise safety concerns among some residents;
- increasing traffic volumes, including changes in the composition of traffic (e.g., larger vehicles), which raises traffic safety concerns among some residents but also helps spur further improvements to the local and regional road network (e.g., improvements to Highway 63);
- rising employment and personal incomes which can help to alleviate social issues related to poverty and poor self-esteem, but may also contribute to

negative behaviours, including increased alcohol and drug abuse, especially among those lacking financial experience; and

- increasing financial support for policing positions in the region, both through royalty and tax payments and through special funding arrangements for selected positions, such as the enhanced policing positions in Fort McKay.

4.6.2 Effects Assessment

4.6.2.1 Project Effects

The effect of Shell's PRM project on local public safety and policing will be minimal. Effects on the urban service area will largely follow population effects. For communities such as Fort McKay and Fort Chipewyan, Project effects will primarily be related to camp-based populations associated with construction.

The project's camp-based populations will be housed in full-service camps, with health care, security, emergency, and recreation facilities and services, thus limiting the need for workers to visit local communities or engage with local Aboriginal peoples outside the Project Development Area. Camp security will also augment the total number of security resources in the region. Current and anticipated future practice indicates that company security forces assist the RCMP within and sometimes outside the Shell lease boundaries. Examples include securing accident scenes and assistance with highway closures.

Shell will also have in place explicit and enforced camp, workplace, and flight policies with regards to the use of alcohol, drugs and illegal activities. Shell is also engaged in public safety issues in the communities. An example is the three-year commitment to Safe Communities Wood Buffalo, a non-governmental organization, to fund three safety programs focused on grade eight and nine students and young drivers.

The information on public safety and protective services does not allow for differentiation among First Nations and other Aboriginal groups. Interviews with RCMP, conducted for this research, indicate that the engagement of service providers is on the individual and community level. Service providers were unable to distinguish membership of particular Aboriginal groups among their clientele.

4.6.2.2 Future Development

Current and planned development in the oil sands industry will contribute to both the positive and negative effects on public safety and policing already noted (Section 4.6.1).

Population growth assumed under the 2013 PDC will increase demand for local policing, requiring additional facilities, programming and staffing. The local RCMP are in a much

better position to deal with this increased growth than in previous years largely as a result of additional resources being made available.

To mitigate effects on public safety and policing, industrial operators in the region often have in place:

- explicit and enforced lodge, workplace, and flight policies with regards to the use of alcohol, drugs, and illegal activities;
- in-lodge security, which will assist the RCMP within, and sometimes outside, their individual lease boundaries (e.g., securing accident scenes, assisting with highway closures); and
- limits on private vehicles brought to the project sites, reducing commuter traffic on Highway 63, thus decreasing the need for traffic enforcement.

Some industrial operators have also provided direct financial support for policing services in the region (e.g., policing positions in Fort McKay) as well as for improvements to transportation infrastructure that benefits the larger transportation network (e.g., Suncor interchange over Highway 63 and improvements to Fort McKay turnoff along Highway 63).

4.7 Traditional Land Use

4.7.1 Situation Analysis

The relationship between Aboriginal peoples and their traditional lands is integral to community well-being. From the perspective of Aboriginal peoples in the region, this mutually sustaining relationship has defined their identity over the centuries. Aboriginal peoples in the region also note that traditional lands themselves are not merely a source of community well-being. They are also the place where traditional pursuits and knowledge are passed from generation to generation.

Aside from the important social and cultural aspects, traditional land use (TLU) is also an economic activity, particularly for those individuals and families which hold traplines in the region. TLU also provides an economic supplement for some Aboriginal families in the region, especially in smaller rural communities like Fort Chipewyan where food costs are relatively higher (MacDonald 2012, Larcombe 2012). In a 2008 study, 98% of Aboriginal participants in the RMWB reported eating some traditional food (Treefrog 2008 cited in Orenstein et al. 2013).

Aboriginal groups have indicated that oil sands development has contributed in recent years to changes in traditional land use through:

- Changes to the bio-physical environment, including the take-up of or changes to land and wildlife. These changes, in turn, have led to:
    - reduced land base, traditional plant sites, and wildlife available for carrying out harvesting activities and passing on traditional knowledge,
    - increased experiences with and concern about potential environmental pollutants, including water quality and quantity, noise, visual effects, and odour which reduces the quality of the traditional land use experience and increases the avoidance of certain areas, such as those within close proximity to oil sands development,
    - reduced income for trappers and reduced income-in-kind for those who harvest and/or consume country foods, and
    - an increase in the distance some traditional users have to travel in order to access traditional lands, in turn leading to the need for increased supplies (e.g., fuel, water), reducing the ease and increasing the cost of carrying out harvesting activities.
- Changes to the socio-economic environment, which can have positive and negative effects on the ability of Aboriginal residents to carry out traditional land use, including:
    - attracting workers and their families to the region, thus increasing the regional population and driving increased competition for traditional resources (e.g., hunting, fishing).
    - offering increased employment and training opportunities for Aboriginal workers, which, in turn, leads to:
        - less time available for carrying out traditional activities and to pass on traditional knowledge to future generations as a result of work commitments, including traveling out of the home community during shifts (e.g., camp-based work)
        - increased incomes, which can:
            - increase the resources available to purchase hunting and harvesting equipment (e.g., rifles, snowmobiles), thus increasing the effectiveness in carrying out traditional pursuits,
            - reduce the economic need to carry out traditional land use, and

- increase income disparity in the region, potentially reducing social cohesion and contributing to negative behaviours (e.g., alcohol and drug abuse) that in turn reduce the interest or ability of Aboriginal residents to pursue TLU activities.

Other external factors, such as those noted in Section 2.4, also impact traditional land use. While industry – i.e., oil sands development – is a dominant external influence on traditional land use in the Wood Buffalo region, other external influences are likely to also have an ongoing effect on Aboriginal peoples.[8]

Work conducted for the ACFN indicate that there is insufficient information and data to reliably comment on whether the ability for Aboriginal residents to pursue and enjoy the rights and benefits of traditional land use and knowledge is at, or near, or beyond sustainability thresholds (Larcombe 2012). Even so, Aboriginal peoples in the region have indicated that reduced engagement in traditional land use has affected community well-being and contributed to ongoing social changes. Examples include:

- feelings of loss, anxiety, frustration and even resignation among some community members, especially elders;
- changes in social values and norms, such as sharing, cooperation, and connectedness;
- changes in social relationships and community cohesion (e.g., a weakening of bonds between elders and youth, increased focus on the nuclear, as opposed to the extended, family, and a sense of marginalization among elders);
- a reduced sense of self-sufficiency and an increased reliance on store-bought foods and the wage economy; and
- feelings of powerlessness, frustration and isolation among some community members who feel their concerns with the negative effects of development are not being adequately heard and properly addressed.

These concerns are shared among all Aboriginal groups, but felt most acutely by individuals and families in rural communities and reserves who typically engage more directly in traditional activities or rely on the outcome of traditional land use (e.g., traditional foods).

[8] Aboriginal groups in other parts of the country have also highlighted barriers to engaging in harvesting activities. According to results from the First Nations Food, Nutrition and Environment Study (FNFNES), the main barriers to using more traditional foods among on-reserve First Nations households in Manitoba and British Columbia were: lack of hunters; lack of equipment/transportation; lack of availability; and lack of time.

As in other regions, the importance of TLU as an economic activity has been declining in the Wood Buffalo region for some time. Reduced engagement in traditional land use has the effect of reducing country food consumption and increasing reliance on store-bought foods. This can be especially challenging for community members who are on low or fixed incomes (e.g., Elders, single parent families), particularly in remote communities where food prices are relatively higher (Section 4.2.1.6).

Many industrial developers attempt to directly manage, mitigate or compensate for the effects of development on traditional land use by:

- consulting with local Aboriginal communities on a number of issues, including TLU;
- providing compensation to trappers directly affected by development;
- facilitating access across development areas for trappers and traditional users;
- minimizing as far as is practicable the land disturbance and practicing progressive reclamation;
- participating in regional multi-stakeholder planning and research initiatives (e.g., CEMA) which consider issues of relevance to traditional land uses; and
- supporting the collection of traditional ecological knowledge (e.g., traditional land use studies).

Responding to Aboriginal groups in the region that indicate that reduction in the pursuit and enjoyment of TLU activities has social and cultural effects, Shell and other industrial proponents, also support a number of cultural retention initiatives aimed at helping Aboriginal communities to maintain their social cohesion and unique characteristics (JRP SIR 69a response).

4.7.2 Effects Assessment

4.7.2.1 Project Effects

Project effects on TLU have been assessed as part of the response to JRP SIR 8 provided in Appendix2, Section 3.5.1 and Appendix 2, Section 2.5.1 and 3.5.1 of this submission. The effect of PRM alone on traditional activities such as fishing, hunting, trapping, and traditional plant gathering is not considered a likely significant adverse effect. A summary of assessed effects on TLU by Aboriginal group is provided in Appendix 7 (Cultural Effects Review).

With respect to Project-induced changes in the socio-economic environment and how that may impact TLU activities:

- The Project is not expected to be a sizeable driver of population growth in the region and thus not a sizeable driver of increased competition for traditional resources (Section 4.1.2.1). The Project's remote location, use of a camp-based model for housing workers, and use of FIFO will also limit opportunities for workers to engage in backcountry activities while in the region.

- The Project will provide additional employment and business opportunities for local Aboriginal peoples and businesses (Section 4.2.2.1), thus contributing to both the positive and negative effects on TLU outlined in Section 4.7.1, above. A further mitigating factor will be Shell's fly-in/fly-out (FIFO) program for employees residing in Fort Chipewyan. As compared to leaving the community for wage employment, Shell's FIFO program provides Fort Chipewyan residents an opportunity to maintain closer contact with their home community and engage in traditional activities.

Project effects on TLU will contribute to socio-economic changes for Aboriginal residents in the region, as outlined in Section 4.7.1. The relatively small Project effects contribute to the cumulative effects addressed below.

4.7.2.2 Future Development

Cumulative effects on TLU for each Aboriginal group have been assessed as part of the response to JRP SIR 8 provided in Appendix 2, Section 3.5.1 and Appendix 2, Section 2.5.1 and 3.5.1 of this submission. Effects on TLU consider the effects on opportunities to conduct TLU plus possible added effects resulting from odour, noise and visual impacts, effects to human health, and individual or community responses to socio-economic factors. The effect of the 2013 Planned Development Case (PDC) on traditional land use was assessed as significant for a number of Aboriginal groups. A summary of assessed effects on TLU by Aboriginal group is provided in Appendix 7 (Cultural Effects Review).

2013 PDC changes in the socio-economic environment will impact TLU activities in the following manner:

- Under 2013 PDC assumptions, the population of Fort McMurray is expected to grow from approximately 76,000 in 2012, to nearly 137,870 in 2030 (Section 4.2.2.2 and Appendix 2, Section 3.5.2. Based on information from 2007-2011, increases in the number of resident hunters[9] in the RMWB generally follows regional population growth (Appendix 7). Future increases in the regional

[9] Note that the term resident hunter applies to a resident of Alberta, and that a hunter active in the RMWB may not live there.

population can therefore be expected to drive increased competition for traditional resources.

- Development included in the 2013 PDC will expand available employment and business opportunities. The relatively small regional population and high levels of engagement in the labour force mean that many of these opportunities will be filled by workers who currently reside outside the region. Even so, a number of industrial proponents, including Shell, have identified local Aboriginal hiring and business development as important to their operations. Taking up training and new economic opportunities has implications for carrying out TLU. Income and rotational work can provide resources and opportunities for harvesting; however engagement in wage employment can also result in less practice of traditional activity, more use of English, and less application of traditional values and knowledge. A reduction of harvesting, or sharing of harvest, also has the potential for effects on food security (particularly of the more vulnerable), nutrition and health.

Changes in the participation and enjoyment of TLU activities will continue to affect ongoing social change and influence community well-being within Aboriginal communities in the region. Social change is often the result of varying and sometimes competing forces within a community. Even so, Aboriginal peoples in the region have consistently reported negative effects on community well-being as a result of reduced engagement in TLU activities, brought about by oil sands development.

The scale of oil sands development, and the speed at which it is occurring, is a concern with regards to the capacity of local Aboriginal communities to cope with this disturbance. This is especially important given the largely negative effects on local resilience resulting from past experiences, such as residential schooling.

Many of the approaches taken by proponents, such as Shell, that are listed in the responses to this SIR and JRP SIR 69a, offer local Aboriginal communities opportunities that can help build local capacity. Employment and training opportunities in close proximity to home communities, support for capacity-building initiatives, the establishment and enhancement of institutional mechanisms, and the disbursement of funding and other resources to local Aboriginal groups can help individuals and communities to regain some authority over and manage future change.

5. After Reclamation

5.1 Project Effects

Except for reclamation activities, the key socio-economic drivers of the Project operations effect will cease at closure. The post-closure reclamation work will consist mostly of earth moving and establishing the desired closure landscape, the removal of industrial facilities, and environmental monitoring.

No estimates are available for the post-closure workforce. Generally, however, it will be much smaller than the operations workforce and the work, with the exception of the environmental monitoring work, will be of a limited duration.

On a regional level, the smaller and reducing workforce and level of economic activity on the Project site will reduce the Project's contribution to the regional economy, workforce, and population and the social stressors that are associated with population growth.

From the perspective of the First Nations and Aboriginal groups in the region, the smaller and reducing workforce and level of economic activity on the Project site will reduce employment and contracting opportunities. However, the environmental focus of post-closure work and the engagement of First Nations and Aboriginal groups in end land use planning may well mean a higher level of involvement of Aboriginal people and companies in post-closure work than normal Project operations. Aboriginal groups have indicated a desire to be engaged in environmental monitoring and reclamation activities, both with respect to planning these activities as well as carrying them out (e.g., employment and business opportunities).

Once reclamation is completed, the ongoing work will be limited to environmental monitoring to ensure that the newly created landscape functions as intended. Current closure plans indicate that wildlife habitat will be reestablished, creating the biophysical preconditions for the re-introduction of traditional land uses on the reclaimed landscape.

Aboriginal groups in the region have raised concerns regarding the potential for carrying out traditional land uses on reclaimed landscapes, including:

- whether reclaimed lands and associated plant and wildlife species will be of sufficient quality and quantity to support traditional activities;
- the loss of site-specific traditional knowledge as a result of the duration in which affected lands are unavailable for traditional activities and changes to the landscape resulting from operations and reclamation activities; and

- the loss of “spirit” on reclaimed landscapes.

The reintroduction of traditional land uses on reclaimed lands is expected to be achievable, from a biophysical perspective (an assessment of the Project’s terrestrial effects after reclamation is provided in Appendix 2, Section 3.4). Acceptance of these lands by local Aboriginal peoples for traditional activities may take longer. Acceptance will depend on a number of factors, including: the relationship Aboriginal groups have with industry (e.g., level of trust); improvements in reclamation technologies; the ability of TLU practitioners to regain or establish site-specific traditional knowledge on reclaimed lands; and the participation of Aboriginal groups in planning and carrying out reclamation activities. For its part, Shell expects to be continuously using and expanding on how it uses Traditional Knowledge information in reclamation planning.

Currently the planning around closure, ongoing reclamation and ongoing monitoring is strictly conceptual. Closer to the end of the active Project operations, Shell will expand on its closure plan to manage the closure process, the ongoing reclamation and monitoring. This plan will:

- take into consideration the likely socio-economic environment in which the closure will take place;
- take into consideration Aboriginal community and public stakeholder input provided during ongoing Project consultations; and
- draw upon the industry’s experience with mine closures.

5.2 Future Development

The long Project life places the socio-economic effects associated with closure and after reclamation well outside the typical 3, 5 and sometimes 10-year planning horizons of authorities and service providers. There are, however, some long-term plans in place. Examples include Alberta’s Comprehensive Regional Infrastructure Sustainability Plan and the RMWB’s Municipal Development Plan. There are also longer-term outlook documents (for example IEA 2011) that suggest an ongoing world demand for hydrocarbons even in a greenhouse gas emission constrained world. Taken together these longer-range scenarios suggest:

- an ongoing oil sands industry in the region at closure of the PRM and after reclamation of its site;
- continuing employment opportunities to support a substantive regional population.

Ongoing oil sands development will mitigate shocks to the regional economy associated with the Project closure. Skilled workers and contractors, including First Nation and

Métis individuals and companies, are likely to have alternative employment and contracting opportunities in the continuing oil sands industrial activity in the Region.

Beyond the likelihood of ongoing oil sands industry activity in the region, there is little certainty with regards to the larger socio-economic environment at Project closure and after reclamation. Much change is anticipated in the socio-economic landscape over the 30-plus year operating lifespan of the PRM Project. How the socio-economic situation will evolve will depend on complex interactions between worldwide, national, provincial, and local forces and reactions to them by the public and private sector actors and individuals. To illustrate, the dominant technologies used in the oil sands industry today (truck and shovel mining and SAGD in-situ recovery) were not yet in place 30 years ago and the IBM personal computer had only just been introduced. The changes in the next 30-plus years will likely be similarly large and some of them will likely be outside of what is currently expected. Oil sands technology will change, as will health, education, and social service delivery methods and approaches.

6. Summary

Oil sands industry development has contributed to a number of socio-economic pressures that local First Nations and other Aboriginal groups face, including:

- changes in family and community practices and relations;
- increasing social stressors, such as work demands that take time away from family; and
- increased pressures on housing and regional services that are accessed by both Aboriginal and non-Aboriginal peoples (e.g., health, education, municipal, and social services).

Some of these stresses are driven by socio-economic changes, such as changes in regional population, or increased access to employment and business opportunities. Some are driven by environmental effects that can lead to avoidance of or displacement from lands on which traditional pursuits take place.

Aside from oil sands development, other external influences have had and are likely to continue having an important effect on the socio-economic conditions of local Aboriginal peoples, including:

- the rural and remote location of a number of Aboriginal communities and reserves;
- government policies and supports for Aboriginal peoples; and
- increased interaction with the broader society via advancements in technology (e.g., satellite, internet, cell phones).

From a socio-economic perspective, oil sands development has provided a number of benefits to Aboriginal people in the region, including:

- the negotiation of benefit agreements between Aboriginal communities and industrial proponents;
- increased wages and benefits;
- increased employment and business opportunities;
- increased access to education and training opportunities;
- increased access to a broader range of local services and amenities (e.g., emergency, health and social services); and

- increased industry support for community programs and infrastructure (e.g., financial and in-kind contributions to social groups, education institutions, and health care providers).

As documented in several sections above, the Aboriginal people and communities in the region lead many other Aboriginal communities in terms of employment, income, community well-being index, and housing quality and quantity. However, they trail the population as a whole. As shown in section 4.5.1.4, the data on educational attainment is mixed. Aboriginal students in Fort McMurray have lower drop-out rates and higher high school completion rates as compared to Aboriginal students in other urban centres. The Aboriginal identity population in Fort McMurray also has higher levels of trade certification, but lower levels of university education than the Aboriginal identity population in other urban centres. Student performance in the smaller communities trails their peers elsewhere and the educational attainment of Aboriginal identity population in rural areas is roughly similar to that in other areas of the province.

Many Aboriginal groups have raised concerns with respect to well-being in their communities, including negative effects related to increased wage economy participation and reduced engagement in traditional activities (e.g., decreased community cohesion, changing social values). However, wage economy opportunities close to home can drive positive changes in well-being including opportunities to maintain social and family connections. Development also offers other opportunities – via benefit agreements, contributions to local community initiatives, and taxes paid to government – for Aboriginal groups in the region to address the physical and social conditions that are contributing to negative health outcomes for their members.

Work done by the ATC and others note the central importance of education and training in order for individuals to benefit from development. They also note existing barriers (for example ATC 2006, Taylor 2009). Ongoing and continuing education and training initiatives can position more Aboriginal people to take advantage of the opportunities provided by development. Aboriginal groups in the region have also expressed a desire for more opportunities to upskill and improve their advancement within a specific industry or occupation and more opportunities to incorporate traditional knowledge into their wage employment opportunities.

The observation that Aboriginal groups in the area compare favourably with other Aboriginal communities on a number of indicators, but still lag behind the non-Aboriginal population suggests that, from a socio-economic perspective, the pressures of oil sands development and the opportunities that it creates are balanced to marginally positive. This general conclusion needs to be placed in context of a number of considerations, including:

- The stresses of oil sands industry development and indeed the broader societal influences accrue differentially within the First Nations and Métis communities. For example, young and educated individuals have a higher likelihood of being able to benefit from job and contracting opportunities than persons who grew up and are skilled in the traditional economy.

- The analysis presented here looks at a number of broader general indicators. Additional indicators are possible, subject to data availability.

Shell's PRM project will contribute to both the stresses and opportunities discussed above. Shell is committed to taking a number of actions to minimize the stresses and maximize the benefits from its Project, including:

- using full-service camps during both construction and operations, which will greatly reduce the need for workers to draw on local services and infrastructure;

- complementing existing regional resources with in-camp security and on-site health services;

- providing support for local community initiatives (e.g., financial and in-kind contributions to social groups, education institutions, and health care providers), where appropriate; and

- working with the IRCs and employment coordinators to identify and remove barriers to employment, wherever possible.

Taking into consideration likely ongoing socio-economic effects from larger external influences and the actions and mitigations being taken by Shell, the magnitude of the Project-related socio-economic effects on Aboriginal groups in Fort McMurray, Fort Chipewyan, and Fort McKay are expected to be negligible.

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7.3 Additional Sources

A number of additional sources were reviewed in preparing the assessment presented here, although not directly referenced. These sources are in addition to consultations carried out by Shell and other industrial proponents with First Nations and Métis groups in the region, as well as past regulatory applications and reviews of these applications by consultants of Aboriginal groups in the region.

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