

**APPENDIX 6 – SIR 32 –  
SUPPLEMENTAL INFORMATION FOR THE  
JACKPINE MINE EXPANSION PROJECT –  
ASSESSMENT OF SOCIO-ECONOMIC EFFECTS  
ON ABORIGINAL GROUPS**

***Submitted to*** Shell Canada Limited

***By*** Nichols Applied Management  
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## Table of Contents

1.	Introduction.....	1
2.	Assessment Scope .....	2
2.1	Project Impact Model.....	2
2.2	Key Questions.....	3
2.3	Key Indicators.....	3
2.4	Other Influences.....	4
2.5	Level of Analysis .....	5
2.6	Study Area Boundaries .....	6
2.7	Temporal Boundary.....	6
2.8	Data Sources.....	6
2.9	Data Limitations .....	7
3.	Socio-Economic Setting.....	8
3.1	Historical Context .....	8
3.2	Aboriginal Population.....	9
3.3	First Nations and Métis Locals.....	12
3.4	Roles and Responsibilities .....	15
4.	Socio-Economic Effects .....	18
4.1	Population .....	18
4.2	Employment .....	21
4.3	Health and Well-Being.....	29
4.4	Housing.....	40
4.5	Education.....	45
4.6	Public Safety and Protective Services.....	51
5.	After Reclamation.....	56
5.1	Project Effects .....	56
5.2	After Reclamation Management.....	57
5.3	Future Development .....	57
6.	Summary .....	59
7.	References.....	62
7.1	Works Cited .....	62
7.2	Personal Communications.....	66
7.3	Additional Sources.....	66

## LIST OF TABLES

Table 2.1	External Influences on Aboriginal Peoples.....	4
Table 3.1	Population Estimates for Communities in the Study Area (2006) .....	10
Table 3.2	Age Characteristics (2006).....	11
Table 3.3	ACFN Registered Population .....	12
Table 3.4	MCFN Registered Population .....	13
Table 3.5	FMFN Registered Population .....	14
Table 3.6	FMcFN Registered Population.....	14
Table 4.1	Resident Rural Population.....	18
Table 4.2	Labour Force Indicators for the Aboriginal Identity Population 15 Years and Over (2006): Urban Communities .....	22
Table 4.3	Community Well-Being Index: Fort McKay (2006).....	34
Table 4.4	Health and Social Services.....	35
Table 4.5	Current Education Services .....	47
Table 4.6	Accountability Pillar Survey Results .....	49

## LIST OF FIGURES

Figure 2.1	Impact Model .....	2
Figure 3.1	RMWB Population 1996-2006.....	10
Figure 4.1	Off-Reserve Aboriginal Identity Population that Participated in Harvesting Activities in the Past 12 Months (2006) .....	21
Figure 4.2	Labour Force Participation Rate for the Aboriginal Identity Population 15 Years and Over (2006): Rural Communities .....	23
Figure 4.3	Unemployment Rates for the Aboriginal Identity Population 15 Years and Over (2006): Rural Communities.....	23
Figure 4.4	Median Income for the Aboriginal Identity Population 15 Years and Over (2006): Urban Communities .....	26
Figure 4.5	Median Income for the Aboriginal Identity Population 15 Years and Over (2006): Rural Communities .....	27
Figure 4.6	Perceptions of Health Status among the Off-Reserve Aboriginal Identity Population (2006).....	30
Figure 4.7	Off-Reserve Aboriginal Identity Population With One or More Chronic Health Conditions (Self-Reported) (2006) .....	31
Figure 4.8	Dwellings Requiring Minor and Major Repairs .....	41
Figure 4.9	Crowding Levels.....	42
Figure 4.10	Education Attainment Levels for the Aboriginal Identity Population 15 Years and Over (2006): Urban Communities .....	45
Figure 4.11	Education Attainment Levels for the Aboriginal Identity Population 15 Years and Over (2006): Rural Communities.....	46

## 1. Introduction

The Joint Review Panel (JRP) established to review the Jackpine Mine Expansion (JME) Project has made a supplementary information request of Shell as follows:

*32) As related effects on lifestyle, culture and quality of life of the Aboriginal peoples are of interest to the Panel (Terms of reference, Part III – Scope of the factors) and that the Alberta Environment Terms of Reference, section 10, provides for an assessment of the socio-economic factors. The Panel requests that Shell:*

*a) 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 Supplementary Information Request 32. It was prepared by David Schaaf and Maarten Ingen-Housz of 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 and Pierre River Mine Project (as updated)..

This SIR response takes into account the following:

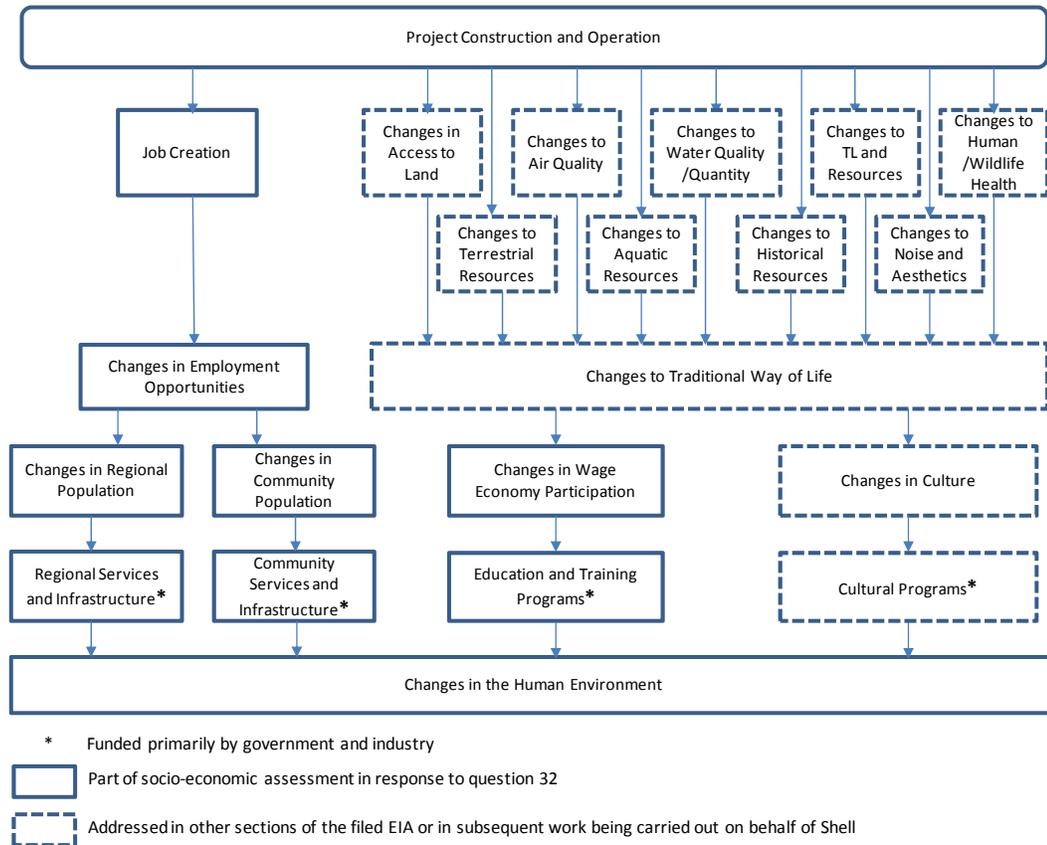
- Regulatory timelines;
- work already completed, including the filed SEIA, subsequent SEIA updates, Supplementary Information Request (SIR) responses, and other socio-economic studies and reports;
- additional work to which Shell has committed, including:
  - an updated cumulative effects assessment;
  - a pre-industrial baseline case; and
  - a cultural assessment.

## 2. Assessment Scope

### 2.1 Project Impact Model

The following impact model identifies the way in which Shell’s Jackpine Mine Expansion (JME) Project may impact the human environment.

**Figure 2.1 Impact Model**



The model demonstrates that the Project, like oil sands development in general, affects the human environment through a number of pathways including changes in the biophysical environment, employment creation and associated population growth.

A number of the effects on the human environment relate to Aboriginal rights and interests. While socio-economic effects will be addressed in responding to SIR Q32, other human environment effects, including effects on culture and traditional land use, are addressed in other sections of the filed EIA or in subsequent work being carried out on behalf of Shell.

## 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 the **population** in Fort McMurray, Fort McKay and Fort Chipewyan?
- Will the project change **participation in the wage economy** of Fort McKay and Fort Chipewyan residents and Aboriginal residents of Fort McMurray?
- Will the project affect **skill levels, education attainment, and education and training services** of residents of Fort McKay and Fort Chipewyan and Aboriginal residents of Fort McMurray?
- Will the project affect **public safety and protection** in Fort McKay and Fort Chipewyan and for Aboriginal residents of Fort McMurray?
- Will the project affect **health care** for Fort McKay and Fort Chipewyan and for Aboriginal residents of Fort McMurray?
- Will the project affect **housing conditions and housing programs** in Fort McKay and Fort Chipewyan and for Aboriginal residents of Fort McMurray?
- Will the project affect **social conditions and social services** in Fort McKay and Fort Chipewyan and for Aboriginal residents of Fort McMurray?

The filed SEIA answers these questions at a regional level. This assessment will attempt to answer these questions at a community level for First Nations and Aboriginal groups, where possible.

## 2.3 Key Indicators

Socio-economic impact assessments address the effect 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 work force and income; and

- people as social beings, suggesting the following key indicators:
  - population;
  - housing conditions;
  - education attainment levels;
  - social conditions; and
  - capacity of service and infrastructure providers.

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. social conditions).

## 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)	+	<ul style="list-style-type: none"> <li>• employment creation</li> <li>• funding for community initiatives and cultural retention programs</li> </ul>
	-	<ul style="list-style-type: none"> <li>• reduced access and increased disturbance to land</li> <li>• increased population growth placing increased demands on services and infrastructure used by Aboriginal persons</li> </ul>
Government (e.g., policies, programs, funding)	+	<ul style="list-style-type: none"> <li>• government policies limiting access to traditional use areas by non-traditional users</li> <li>• funding for community initiatives and cultural retention programs</li> </ul>
	-	<ul style="list-style-type: none"> <li>• government policies/initiatives directly or indirectly opening up access to Traditional areas (e.g., roads)</li> </ul>
Education	+	<ul style="list-style-type: none"> <li>• incorporation of traditional values in the curriculum or delivery of education services</li> </ul>
	-	<ul style="list-style-type: none"> <li>• compulsory mainstream education curriculum and delivery that limits opportunities for traditional knowledge transfer</li> </ul>
Other Influences (e.g. TV, internet, technology)	+	<ul style="list-style-type: none"> <li>• Aboriginal TV programming</li> <li>• increased access and information sharing pertaining to other Aboriginal communities and traditional culture</li> </ul>
	-	<ul style="list-style-type: none"> <li>• mainstream movies, TV, music</li> </ul>

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 Level of Analysis

The assessment has largely been done at the community level: i.e. 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, which comprises members from the Fort McKay First Nation, the Mikisew Cree First Nation, the Athabasca Chipewyan First Nation and other Aboriginal groups.

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.

## 2.6 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 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.

## 2.7 Temporal Boundary

The temporal boundary of the analysis equals the economic life of the project. The analysis does provide a qualitative discussion of the socio-economic effects after closure and reclamation.

## 2.8 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.

## 2.9 Data Limitations

There are limitations with the available data. Data for small geographies is sometimes difficult to obtain due to reasons of confidentiality and coverage of aboriginal communities even by Statistics Canada is not always complete. Many data sources 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.

### **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**

European settlers 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.

##### **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 MacKay and Fort Chipewyan remained largely Aboriginal (AOSERP 1979, AMA 1975, 1980).

### 3.1.4 1980s to Current Day

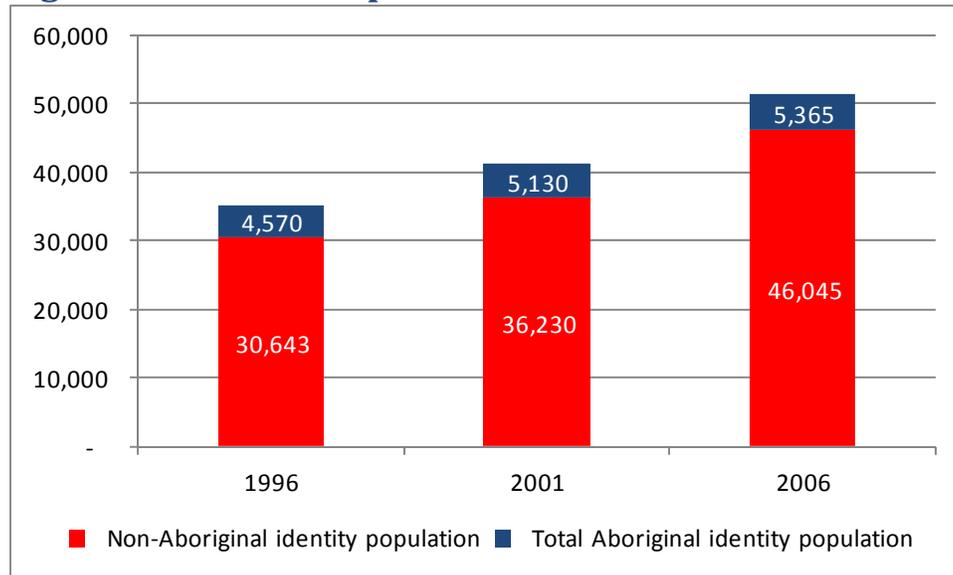
After a period of relative stability in the region's population between 1986 and 1996, the second expansion phase of the oil sands industry again brought rapid population growth. From 1999 to 2008 the resident population nearly doubled from 39,280 to 74,160 with virtually all growth taking place in and around Fort McMurray. Outlying communities saw fluctuations in their population with community members leaving the community in search of employment 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 2008 over 26,280 workers, or over 90% of the non-resident population, lived in camps.

More recently, delays in oil sands project schedules in the wake of the financial crisis of 2008 has led to more moderate population growth.

## 3.2 Aboriginal Population

Figure 3.1 shows changes in the Aboriginal and non-Aboriginal population in the Regional Municipality of Wood Buffalo (RMWB) between 1996 and 2006 based on Statistics Canada census results. Over this 10-year timeframe, the Aboriginal population grew by 17% while the non-Aboriginal population grew by 50%.

**Figure 3.1 RMWB Population 1996-2006**

Source: Statistics Canada, Federal Census 1996, 2001, 2006.

Note: 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. By contrast many of the small, rural communities north of Fort McMurray experienced only marginal growth during this timeframe and remain mostly Aboriginal communities, as illustrated in Table 3.1.

**Table 3.1 Population Estimates for Communities in the Study Area (2006)**

	Fort McMurray		Fort MacKay		Fort Chipewyan		Selected Reserves <sup>2</sup>	
	#	%	#	%	#	%	#	%
Non-Aboriginal	43,415	91%	25	5%	180	24%	10	3%
Aboriginal	4,210	9%	500	95%	570	75%	345	97%
First Nation	1,740	4%	415	79%	460	61%	340	96%
Métis	2,080	4%	75	14%	115	15%	0	0%
Other Aboriginal <sup>1</sup>	380	0%	20	0%	10	0%	0	0%
<b>TOTAL</b>	<b>47,620</b>	<b>100%</b>	<b>525</b>	<b>100%</b>	<b>755</b>	<b>100%</b>	<b>355</b>	<b>100%</b>

Source: Statistics Canada, Aboriginal Population Profile 2006.

- Notes: 1) 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.
- 2) Selected Reserves include the reserve communities of the Mikisew Cree First Nation, Athabasca Chipewyan First Nation and the Fort McMurray First Nation.
- 3) 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 3.2 also shows that:

- the Aboriginal identity population living in Fort MacKay and Fort Chipewyan includes both First Nations members (82%) and Métis peoples (18%). An estimated 83% and 80% of the Aboriginal population of Fort McKay and Fort Chipewyan are First Nations members, respectively;
- nearly 75%, of the Aboriginal identity population and 59% of the First Nations population in the area live in Fort McMurray; and
- the Registered Indian population makes up the majority of community members in Fort Chipewyan, Fort MacKay, and selected reserves in the area.

Demographic data from the 2006 federal census also indicates that the Aboriginal population is considerably younger than the overall population, similar to trends with Aboriginal populations across Canada. Median ages for the Aboriginal identity population in Fort McMurray and communities north are 30 or under, as compared to 31.6 and 36.0 for the total population in the RMWB and Alberta, respectively.

**Table 3.2 Age Characteristics (2006)**

	Fort McMurray	Fort MacKay	Fort Chipewyan	Selected Reserves	RMWB	Alberta
	<i>Aboriginal Identity Population</i>				<i>Total Population</i>	
Median age (years)	27.9	28.9	29.4	30.2	31.6	36.0
under 15 years of age (% of pop.)	22.7%	24.2%	27.8%	27.9	20.1%	19.2%
15 to 24 years of age (% of pop.)	20.8%	19.2%	15.7%	16.2	16.9%	14.9%
25 to 44 years of age (% of pop.)	35.7%	30.3%	27.8%	23.5	36.3%	29.8%
45 to 64 years of age (% of pop.)	19.5%	20.2%	19.1%	20.6	24.9%	25.4%
over 64 years of age (% of pop.)	1.2%	7.1%	9.6%	13.2	1.8%	10.7%

Source: Statistics Canada, Aboriginal Population Profile 2006, Federal Census 2006.

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 MacKay, 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.

#### 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 18<sup>th</sup> and 19<sup>th</sup> 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, and the signing of Treaty 8, many came to use the Fort as a base and settle nearby (ACFN 2011, ATC 2009a).

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

The ACFN had approximately 984 members as of February 2012. Very few (19) reside on ACFN reserves. The majority, 76%, reside off-reserve, including in Fort Chipewyan, Fort McMurray, and outside the region.

**Table 3.3 ACFN Registered Population**

Residency	# of People	% of People
On Own Reserve	19	2%
On Other Reserves	6	1%
On Own Crown Land	198	20%
On Other Band Crown Land	0	0%
On No Band Crown land	14	1%
Off Reserve	747	76%
Total	984	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](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 18<sup>th</sup> century, the Cree were already established as trading partners in the region. By the late 19<sup>th</sup> 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 2012). Over time, as a result of a number of factors including decline in the fur trade, government policies, and the signing of Treaty 8, many also came to settle in and near Fort Chipewyan (MCFN 2012, 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 Mikisew Cree First Nation (MCFN) is the largest First Nation in the region with over 2,700 members as of February 2012. 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 Fort McMurray, Edmonton, and Fort Smith.

**Table 3.4 MCFN Registered Population**

Residency	# of People	% of People
On Own Reserve	150	6%
On Other Reserves	54	2%
On Own Crown Land	510	19%
On Other Band Crown Land	53	2%
On No Band Crown land	8	0%
Off Reserve	1,945	72%
Total	2,720	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=461&lang=eng](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 Mackay. There are an additional two reserves at Namur and Gardiner Lakes, approximately 50 km northwest of Fort Mackay, which are largely unoccupied. Total land area of the FMFN reserves is approximately 14,886 ha (AANDC 2012). The Fort McKay First Nation 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 719 members as of February 2012. 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.

**Table 3.5 FMFN Registered Population**

Residency	# of People	% of People
On Own Reserve	358	50%
On Other Reserves	8	1%
On Own Crown Land	4	1%
On Other Band Crown Land	0	0%
On No Band Crown land	2	0%
Off Reserve	347	48%
Total	719	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](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 Fort McMurray First Nation reserves areas consist of the Clearwater reserve which is located just 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 640 members as of February 2012. Although Gregoire Lake Reserve #176 is the largest and most populated reserve, the majority of members (58%) live off reserve, mainly in Fort McMurray.

**Table 3.6 FMcFN Registered Population**

Residency	# of People	% of People
On Own Reserve	258	40%
On Other Reserves	8	1%
On Own Crown Land	0	0%
On Other Band Crown Land	1	0%
On No Band Crown land	0	0%
Off Reserve	373	58%
Total	640	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](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 15% and 20% of the Aboriginal identity population respectively (see Table 2).

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 Nations in the region have 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 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 waste water 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 Resident Urban Population

Table 3.1 above shows that some 4,200 Aboriginal persons (or 75% of all Aboriginal persons in the region) live in the urban service area. Aboriginal persons make up approximately 10% of the resident population of Fort McMurray, as counted by the Statistics Canada census. The most recent Federal Census population estimate for Fort McMurray is 61,374 and the 2010 municipal census<sup>1</sup> estimates the resident urban population in the range of 76,000 people.

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

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

##### 4.1.1.2 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 54% of the total.

**Table 4.1 Resident Rural Population**

Community	Estimated Population
Fort Chipewyan	1,260
Fort MacKay	860
Reserves <sup>1</sup>	200
Total	2,320

Sources: RMWB Municipal Census 2009, RMWB Municipal Census 2010, Statistics Aboriginal Population Profile 2006.

Notes: 1. Includes the reserve lands of the ACFN, MFCN, FMFN, and FMcFN.

<sup>1</sup> Population counts, forecasts, and methods have been the subject of considerable discussion between the RMWB and various departments of the Alberta government.

These communities are largely Aboriginal (see 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 moving for employment opportunities, family, housing availability and other reasons.

### 4.1.1.3 Non-Resident Population

The non-resident population was over 30,000 people in 2011, approximately 90% of whom live 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. While these improvements serve to attract workers to the region, they also help to reduce the demands of the non-resident population on existing services and infrastructure.

## 4.1.2 Effects Assessment

### 4.1.2.1 Project Effects

Shell's JME Project will not be a sizeable driver of population growth in the region. Population growth related to the Project is expected to be accommodated in the urban service area, with the Project accounting for 7.5% of growth in the next 10 years.

The Project is not expected to have a direct population effect on Fort MacKay or Fort Chipewyan. To the degree that Shell supports economic activity in Fort Chipewyan and Fort MacKay – via employment and business contracts with local Aboriginal workers and businesses – 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 also temporarily contribute to the region's camp-based population during construction. The on-site camp 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

Based on high growth scenarios from the RMWB Population and Employment Projection Model, the long-range regional and project accommodation population growth trend is expected to be over 4% per year, reaching over 230,000 permanent and non-permanent residents by 2030. The RMWB anticipates that nearly 95% of the regional population (excluding work camps) will be accommodated in the urban service area.

The RMWB high growth scenario anticipates that roughly 5% of the 2030 population (excluding work camps), will be in rural communities both north and south of Fort McMurray. The growth scenario suggests relatively high growth in Anzac and an average annual population growth of 2.2% in the other small mostly Aboriginal communities.

The RWMB population projections assume:

- a high production curve of 6.9 million barrels per day (bpd) by 2030; and
- a high number of oil sands operations workers choosing to relocate with their families to Fort McMurray as opposed to remaining in their home communities and staying in project accommodations in the region when working on-site.<sup>2</sup>

The RMWB's recently completed Municipal Development Plan (RMWB 2011) has designated Fort MacKay and Fort Chipewyan as "areas of stability" where "rapid growth is not desired and where the existing character and structure of the community is to be respected."

<sup>2</sup> The OSDG Urban Population Impact Model forecasts a long-term urban service area population growth during the 2025-2030 that is between 10% to 30% lower than the RMWB model. This is related in part to assumptions regarding the growth of camp or project accommodation. The RMWB model assumes camp population remains relatively stable and that many oil-sands related workers choose to relocate with their families to Fort McMurray. The OSDG model accepts current industry plans for camps as an input. The degree to which workers will relocate to Fort McMurray or live in on-site camps is dependent upon a number of factors including: changing approaches to project accommodation; and changes in regional socio-economic conditions, making the region more or less attractive as a community compared with other communities from which oil sands operators could potentially recruit. The regional camp population has increased from 5,900 in 2000 to 30,000 in 2011.

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).

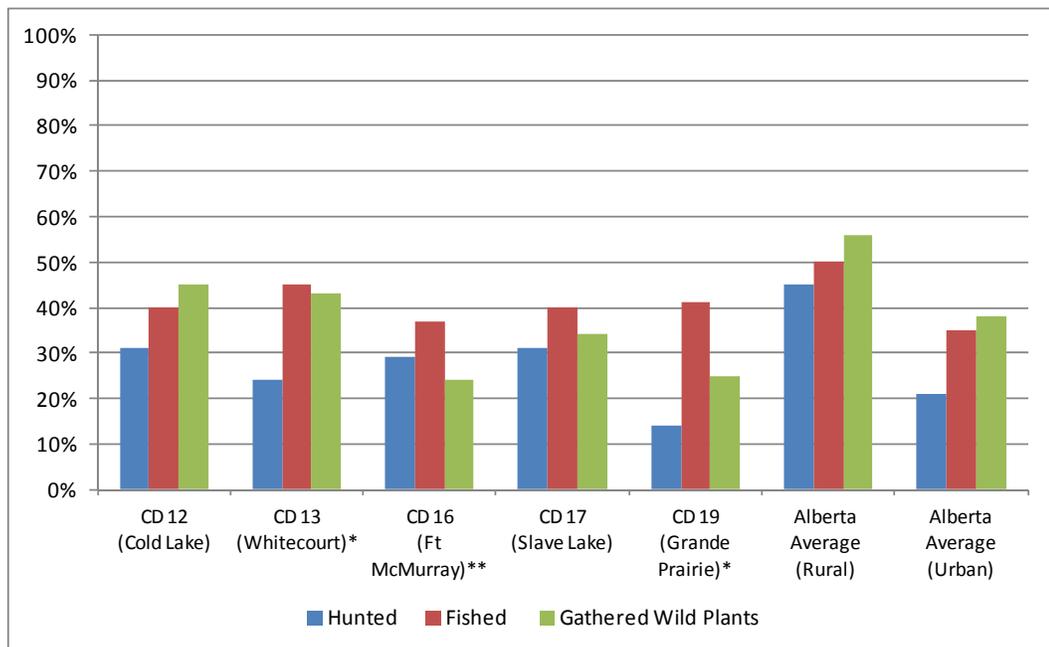
## 4.2 Employment

### 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.

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



Source: Statistics Canada, Aboriginal People's 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.

Today, a number of Aboriginal people in the region have become reliant on wage economy participation and are 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.

#### 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. This expansion has created employment and business opportunities for local workers and businesses, including Aboriginal peoples and companies.

Many of these employment opportunities have been realized by local workers and businesses, including Aboriginal peoples and companies. Table 4.2 provides labour force data for the Aboriginal identity population 15 years of age and over in Fort McMurray and for comparison purposes other urban communities in Alberta.

**Table 4.2 Labour Force Indicators for the Aboriginal Identity Population 15 Years of Age and Over (2006): Urban Communities**

Labour Force Indicators	Fort McMurray	Grande Prairie	Edmonton	Calgary	Medicine Hat	Provincial Average
Participation rate (%)	79.1	81.9	68.5	77.0	83.3	68.3
Employment rate (%)	74.2	77.6	61.4	71.4	77.3	60.8
Unemployment rate (%)	6.2	5.3	10.4	7.3	7.2	11.1

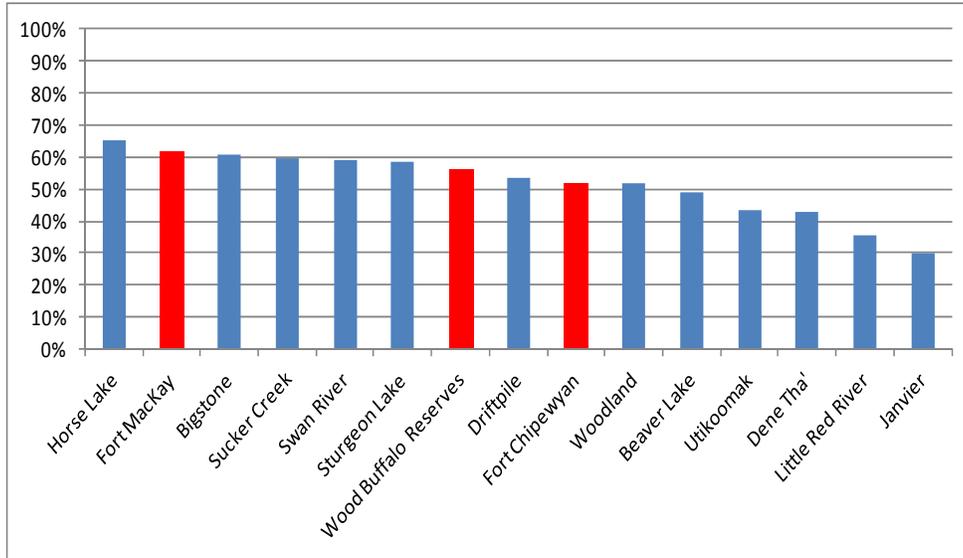
Source: Statistics Canada. 2007. 2006 Aboriginal Population Profile. 2006 Census.

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

- the labour force participation is nearly 80%, comparable or higher than for the Aboriginal identity population in other major urban centres in Alberta, and
- the unemployment rate is 6.2%, lower than most 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 other Treaty 8 communities in Alberta. This data shows that the Aboriginal identity population in rural communities and reserves near or north of Fort McMurray:

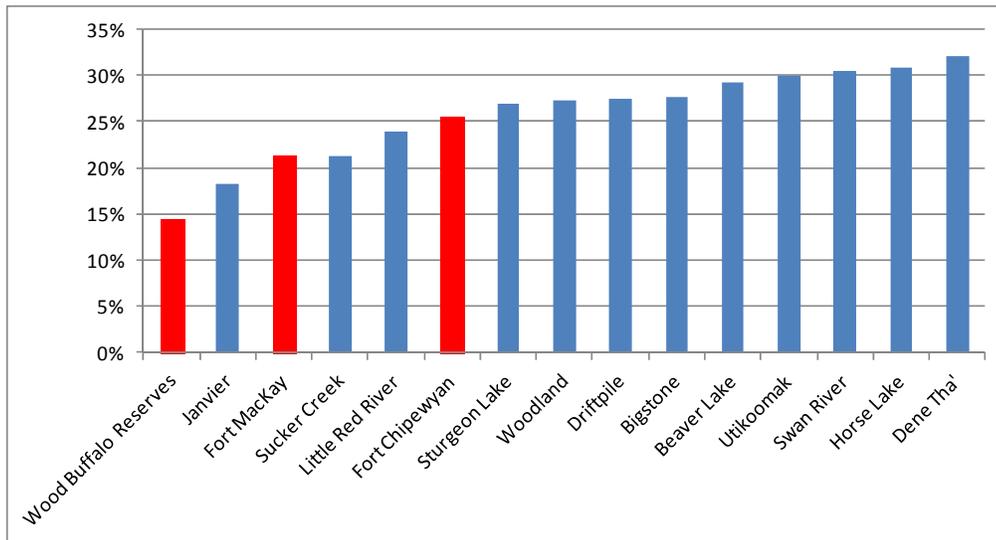
**Figure 4.2 Labour Force Participation Rate for the Aboriginal Identity Population 15 Years of Age and Over (2006): Rural Communities**



Source: Statistics Canada. 2007. 2006 Aboriginal Population Profile. 2006 Census.

Note: Wood Buffalo Reserves includes the reserve communities of the MCFN, ACFN, and FMCFN.

**Figure 4.3 Unemployment Rates 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: Wood Buffalo Reserves includes the reserve communities of the MCFN, ACFN, and FMCFN.

- have labour force participation rates that range from 52% to 62%, comparable or higher than most other Treaty 8 communities in Alberta, and
- have unemployment rates that range from 14% to 26%, lower than most other Treaty 8 communities in Alberta.

Attachment to the labour market is highest among Aboriginal peoples residing in communities in close proximity to development, such as Fort McMurray and Fort Mackay. A number of nearby oil sands operators are offering local Aboriginal workers opportunities for wage employment while continuing to live in their home communities. 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).

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. These challenges are shared among Aboriginal groups in the region and include a lack of required education, skill sets and experience, and transportation. Transportation is especially an issue for Aboriginal people in Fort Chipewyan.

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). 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 flexible wage employment arrangements that would offer their members opportunities to continue practicing traditional activities (e.g. more flexible work rotations, seasonal employment), as well as opportunities to incorporate traditional knowledge into their wage employment opportunities (e.g. the Building Environmental Aboriginal Human Resources (BEAHR) program in Fort Chipewyan).

#### 4.2.1.3 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. Over the past 12 years Aboriginal companies have earned over \$5 billion in revenue. Aboriginal business ventures in the region include:

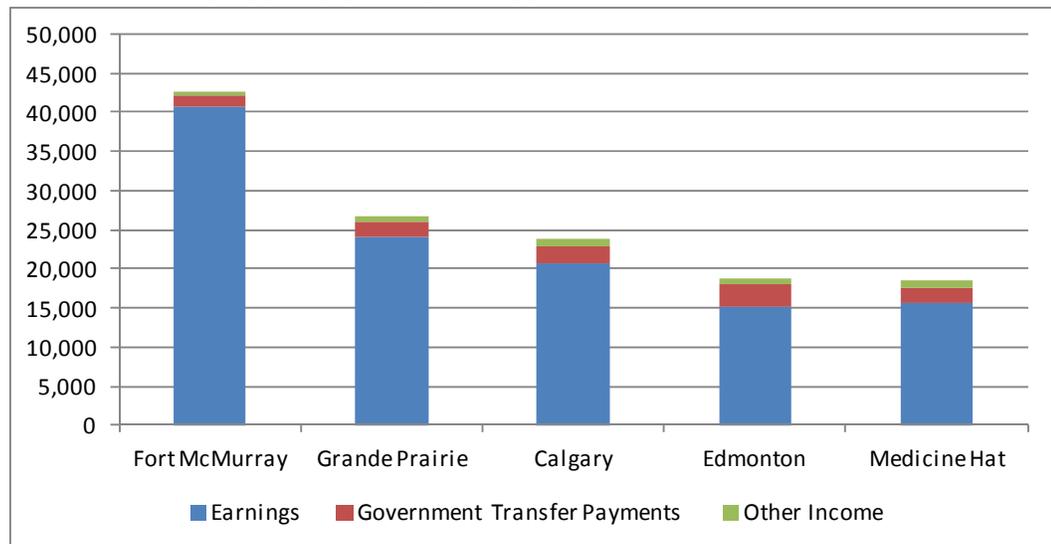
- The Fort McKay Group of Companies, a multi-million dollar organization fully owned and controlled by the Fort McKay First Nation. It employs approximately 500 people who provide services in heavy equipment operation, bulk fuel and lube delivery, warehouse logistics, road and grounds maintenance, environmental 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 2010a, FMGOC 2010b).
- 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 1,400 ACFN and other First Nations members and non-Aboriginal persons across 17 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 (CBJ 2011, ACFNBG 2011).
- 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 workers 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 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. The need to support small Aboriginal businesses and entrepreneurs has been raised by Aboriginal groups in the area. In 2009, the Fort McKay First Nation, 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).

#### 4.2.1.4 Income

Strong economic growth in the region is reflected in the personal incomes of Aboriginal peoples in the region, as shown in Figures 4.4 and 4.5. 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 4.4 Median Income for the Aboriginal Identity Population 15 Years of Age and Over (2006): Urban Communities**

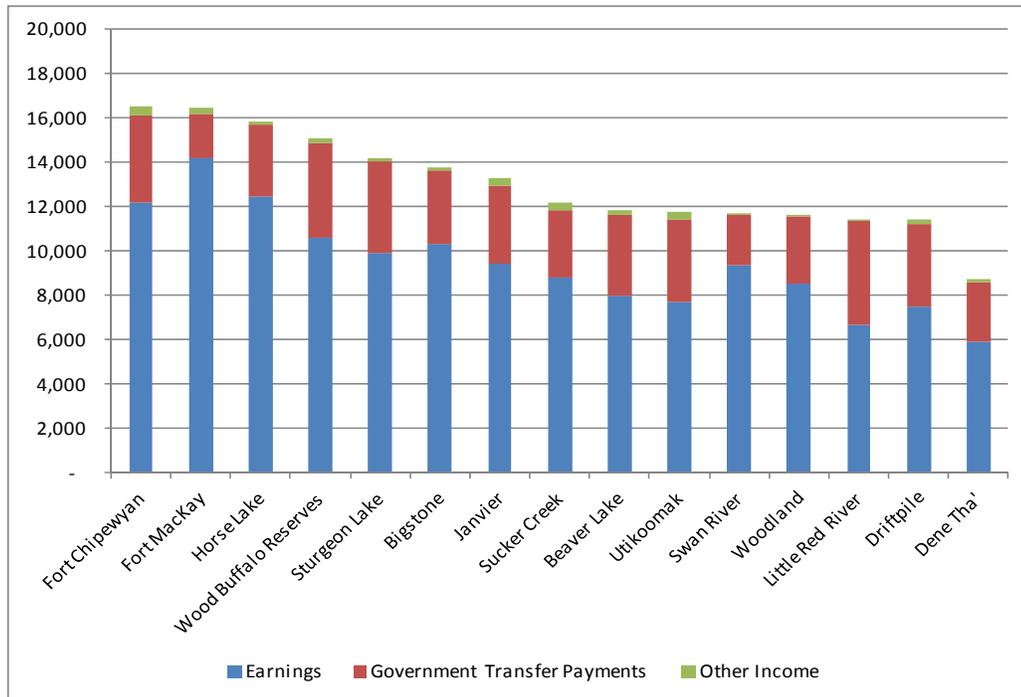


Source: Statistics Canada. 2007. 2006 Aboriginal Population Profile. 2006 Census.

Note: Wood Buffalo Reserves includes the reserve communities of the MCFN, ACFN, and FMCFN.

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 in Fort McMurray than in Edmonton. The cost of food products is between 5% and 10% higher in Fort McMurray than in Edmonton (AFE 2010).

**Figure 4.5 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: Wood Buffalo Reserves includes the reserve communities of the MCFN, ACFN, and FMCFN.

Housing costs are generally lower in small communities than in Fort McMurray, but food prices are higher. The price of food, fuel and other necessities is a concern especially in Fort Chipewyan, which has no all-weather road access to the rest of the province. Food and fuel prices are a widespread concern for many rural northern communities across Canada and is related to their small market size and isolation,

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. The median family income for couple families in Fort McKay and Fort Chipewyan is 4.4 and 3.1 times higher, respectively, than for lone-parent families, while in Fort McMurray it is 2.8 times higher. The corresponding provincial average is 2.3 (StatsCan 2010). 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 lifeskills and financial experience to deal with it.

## 4.2.2 Effects Assessment

### 4.2.2.1 Project Effects

Shell's JME 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 9,310 person-years of on-site employment, while operations will create 750 direct permanent jobs. Most of these jobs are expected to accrue to people new to the region. However, Shell is committed to working with the IRCs and employment coordinators to identify and remove barriers to employment, wherever possible. Shell has set the goal of increasing Aboriginal participation in its workforce and has supported a number of initiatives and programs 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;
- instituting a fly-in/fly-out program for employees residing in Fort Chipewyan;
- 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;
- initiating the Aboriginal Talent Pipeline project;
- 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.

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.

### 4.2.2.2 Future Development

Current and planned development in the oil sands industry will expand employment and business opportunities available. 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, local Aboriginal workers will have an opportunity to benefit from these employment prospects due to:

- 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 initiated programs which provide transportation for workers in Fort MacKay and Fort Chipewyan to commute to work sites in the region (e.g. bussing, fly-in/fly-out). These programs can be scaled up where required.

## 4.3 Health and Well-Being

### 4.3.1 Situation Analysis

#### 4.3.1.1 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, First Nations trail the non-Aboriginal population for most health indicators. Specifically, First Nations have poorer health indicators with regards to infant mortality, life expectancy, rates of diabetes, sexually transmitted infections rates, rates of obesity, rates for chronic diseases, and others (FNIH 2010b, Health Canada 2011, AHW 2012).

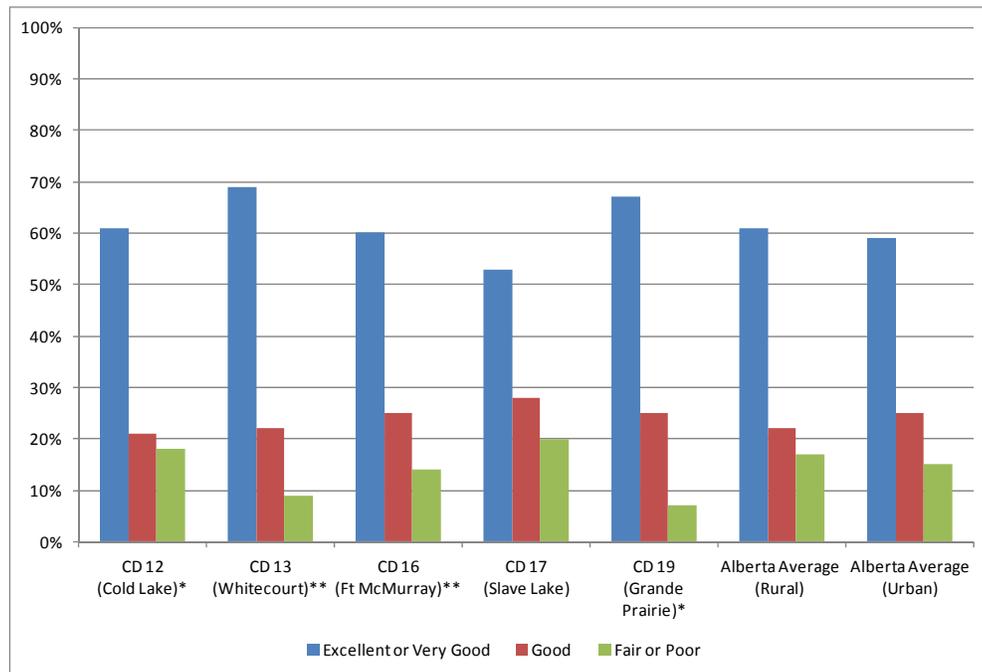
Although little health data is publicly available for Aboriginal groups in the study area, concerns have been raised by Aboriginal groups in the area with regards to a number of these same health issues. Discussions with Alberta Health Services indicate that rates of diabetes, smoking, drinking, sexually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

Research shows that Canadians in rural, remote, and northern communities generally have a lower health status relative to other Canadians (CPRN 2006; CIHI 2006). The former Northern Lights Health Region (which encompasses the RMWB) scores lower than Canada and Alberta as a whole on a number of health indicators, including obesity, smoking, and levels of physical activity (StatsCan 2009). In addition, a public health profile prepared by the Royal Society of Canada Expert Panel identified health concerns in the region, including incidence and prevalence rates for diabetes and incidence rates for infectious diseases (e.g., influenza, sexually transmitted infections) (RSCEP 2010).

Despite these concerns, the overall population of the former Northern Lights Health Region does score better than Canada and Alberta as a whole, on other health indicators including life expectancy, infant mortality, low birth weight, and perceived health (StatsCan 2009, 2011a, 2011b).

Figures 4.6 and 4.7 provide some survey data for the off-reserve Aboriginal identity population in the region with respect to perceived health and self reported chronic health conditions, as compared to other regions in Alberta.

**Figure 4.6 Perceptions of Health Status among the Off-Reserve Aboriginal Identity Population (2006)**



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

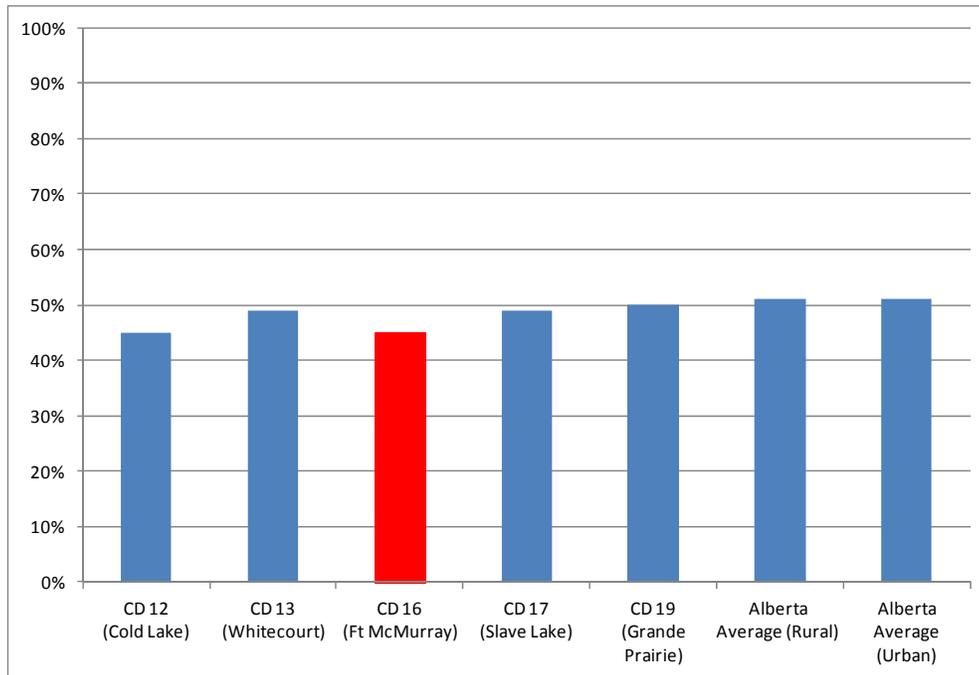
Notes: Aboriginal identity population 15 years of age and older.

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 4.7 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

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:<sup>3</sup>

- Approximately 85% of Aboriginal identity respondents in the region perceive 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.

<sup>3</sup> Data from the Statistic Canada's 2006 Aboriginal Peoples Survey are only available for the off-reserve population. No comparable survey of the on-reserve population in the region is available.

Aboriginal groups in the area have raised a number of concerns with the health effects related to environmental changes brought about by oil sands development. 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.

To address health-related community concerns in Fort McKay, the Government of Alberta recently signed a Letter of Intent to develop a comprehensive community health assessment for Fort McKay. The study is expected to involve Fort McKay First Nation, Fort McKay Métis Community, Alberta Health and Wellness and Alberta Aboriginal Relations working together to identify community health issues, health-care priorities, and the design and delivery of new programs to address those priorities. Discussions between the provincial government and First Nations have also been had for a similar study in Fort Chipewyan, although no agreement has yet been reached.

#### 4.3.1.2 Social Issues

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. It is a concern they 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, such as work demands taking time away from family and community life or family members 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.
- Reduced community cohesion for a number of reasons including divisions over political issues (e.g. how the community should respond to oil sands development), as well as income and social inequality.

These social issues do not exist in isolation but influence one another. A number of these issues have 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 for family and community life, and
- reduced community cohesion and a sense of transience among residents.

Aboriginal groups place the concerns regarding social issues in the context of the transition from a traditional to more modern lifestyle. Examples include:

- Increasing wage economy participation which can lead to:
  - increasing social and family stressors (e.g. decreasing quantity of time spent with families),
  - negative behavioural changes among some community members, especially those lacking financial experience, (e.g. increased alcohol and drug abuse, gambling), and
  - increasing income disparity and social stratification within Aboriginal communities.
- Fewer opportunities available for practicing and transmitting traditional culture, leading to cultural discontinuity including loss of traditional knowledge and Aboriginal language, and changes in social values and norms.
- Increasing stress among community members with respect to potential environmental pollutants on traditional land and resources.
- 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.

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 (NCCA 2009). Current experiences with racism and social exclusion can also create stressors and negatively impacts social conditions as well as health outcomes.

### 4.3.1.3 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.<sup>4</sup> Fort McKay’s overall CWB score, provided in Table 4.3, was among the highest scores for First Nations communities in the province, but still below most non-Aboriginal communities.

**Table 4.3 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.aandc-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.

### 4.3.1.4 Service Delivery

#### *Existing Services*

Table 4.4 provides an overview of current health and social services in Fort McMurray, Fort MacKay 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.

<sup>4</sup> 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 4.4 Health and Social Services**

<b>Fort McMurray</b>	<b>Fort McKay</b>	<b>Fort Chipewyan</b>
<ul style="list-style-type: none"> <li>• Alberta Health Services (North Zone) has primary responsibility for the delivery of many provincially funded health services in the study area.</li> <li>• 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.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• The breadth of health services available at the Centre have expanded in recent years. Future services are also being considered at the Fort McKay Health Centre including Internal Medicine Specialist visits, pharmacy services, and dentist and optometrist clinics (FMFN 2012a).</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• The Nunee Health Authority (NHA) has a memorandum of understanding with Alberta Health Services to deliver health services to all residents in that community.</li> <li>• The MCFN, ACFN and Métis in Fort Chipewyan each appoint a member to the Nunee Health Authority Board of Directors.</li> </ul>

Fort McMurray	Fort McKay	Fort Chipewyan
<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• 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</li> <li>• 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, Discover E Science Camp (sponsored by Shell), Theatre Camp, the Fort McKay/Shell Canada Youth Leadership Program.</li> <li>• There is a Community Development Team in Fort McKay who's aim is: <i>"To identify, and address community issues and implement safe and healthy programs to support a holistic lifestyle in the community of Fort McKay."</i> (FMFN 2012b)</li> <li>• The new Fort McKay Elder and Day Care Centre – an 8,700-ft<sup>2</sup> facility – opened in January 2010 after fire destroyed the original building in 2007.</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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).</li> <li>• 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).</li> </ul>

## 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 MacKay 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 ward. Issues in delivering adequate health services to the residents of the region include:

- The need for additional health infrastructure, including a continuing care facility.
- 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 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 area,
- additional funding has been provided to address health-related growth pressures,
- emergency department wait times have been reduced,
- investments in regional health infrastructure have been made, including:
  - two new community health centres,
  - renovations to the ambulatory and emergency departments of the Northern Lights Regional Health Centre, and
  - a commitment to add 100 continuing care spaces in Fort McMurray.

Improvements have been made in delivering health services for all residents, including Aboriginal people. In 2009/10, 89% of patients at the Northern Lights Regional Health Centre Emergency Department (ED) were treated and discharged within the targeted 4 hours, the best performance of any teaching, metropolitan, large urban, or regional hospital in the province (AHS 2010b). Looking forward, the development of new primary care facilities and plans for 100 new continuing care spaces will also help to reduce pressure on the emergency department by enhancing primary care capacity in the region and freeing up hospital beds.

### *Social Services*

Challenges in recruiting and retaining staff are echoed in the social service sector as well. Often times 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) 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).

A number of 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 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 (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 JME 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 effect 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.
- Recruiting health care professionals, including physicians, for on-site medical facilities from outside the Wood Buffalo region, such as from Edmonton and Calgary.

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 supported the rebuilding of the Fort McKay Elders Centre and 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. More generally, Shell has contributed over \$16 million in 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 reviews of Shell's filed SEIA 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. 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 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 increased access to alcohol and drugs in communities such as Fort McKay and Fort Chipewyan. 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 updated 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. Service providers are in a much better position to deal with this 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.

In addition, many industry operators in the area are carrying out initiatives to reduce effects of oil sands development. 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.

Industry already supports a number of health and social programs offered in Fort McKay, Fort Chipewyan and Fort McMurray. 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 First Nations and Métis Housing**

On reserve housing is delivered mostly by the First Nations with financial assistance from Aboriginal Affairs and Northern Development Canada (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. Over the past number of years, The FMFN has developed a new residential area with homes being constructed by community-based builders.

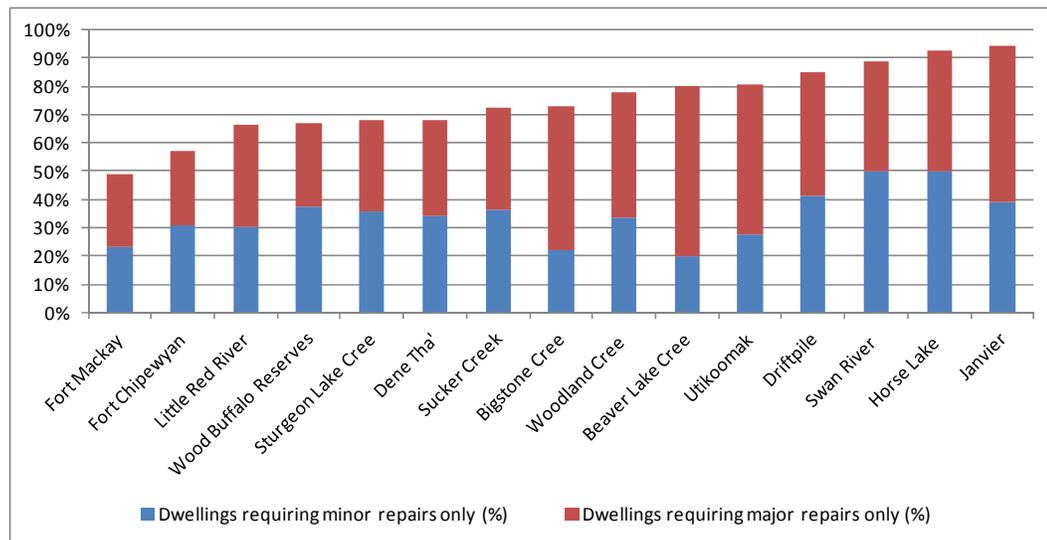
The MCFN has housing on the Dog Head and Allison Bay reserves, near Fort Chipewyan and builds between two and four new housing units a year. The MCFN housing program has a waiting list.

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 has a waiting list. 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 and limited technical oversight and community construction capacity.

Housing for Métis is a concern. The quality and needed supply of housing stock for Métis in Fort Mackay lags that of the FMFN and the Métis Local 63 is developing plans to develop housing for members. Potential funding for this housing program may come from profits generated by Métis Local-owned companies. The situation is similar 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 housing stock in the communities. An estimated 50% and 60% of dwellings require major or minor repair in Fort Mackay and Fort Chipewyan, respectively. This is higher than the provincial average of 34% of housing units requiring repair, but lower than in many other reserves in northern Alberta, as shown in Figure 4.8.

**Figure 4.8 Dwellings Requiring Minor and Major Repairs**



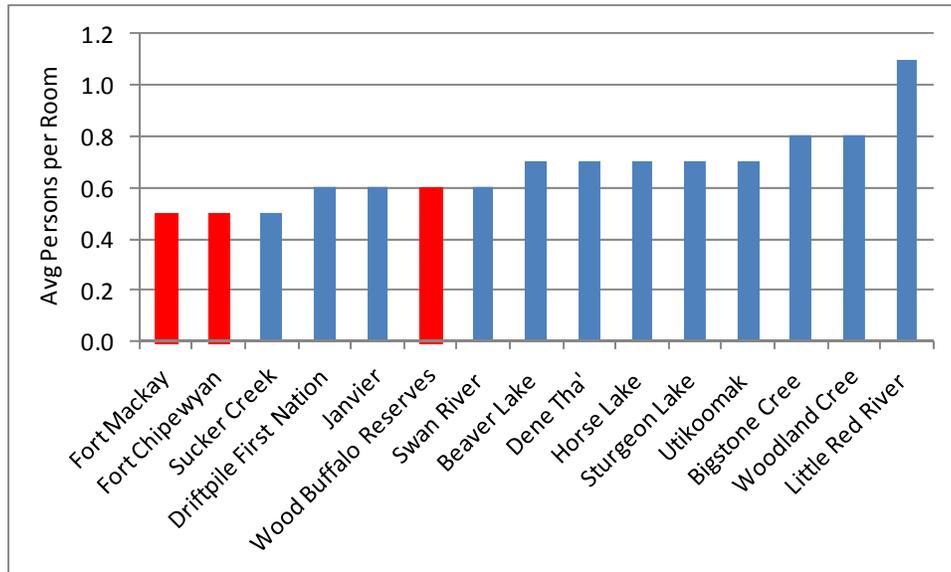
Source: Statistics Canada. 2007. 2006 Aboriginal Population Profile. 2006 Census.

Note: Wood Buffalo Reserves includes the reserve communities of the MCFN, ACFN, and FMCFN.

Figure 4.8 is based on 2006 Federal Census data, the most recent housing data available and do not reflect the housing initiatives from the three First Nations since 2006.

The crowding levels in Fort McKay and Fort Chipewyan show a similar picture. Fort Chipewyan and Fort MacKay both show densities of 0.5 persons per room, while other Wood Buffalo reserves have a density of 0.6, as shown in Figure 4.9. These density rates are at the lower end of northern reserves, and are in line with density levels experienced by Aboriginal persons in Edmonton.

**Figure 4.9 Crowding Levels**



Source: Statistics Canada. 2007. 2006 Aboriginal Population Profile. 2006 Census.

Note: Wood Buffalo Reserves includes the reserve communities of the MCFN, ACFN, and FMCFN.

#### 4.4.1.2 Private Market Housing

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

There is a market for private housing in Fort Chipewyan, although it is very small and rudimentary, reflecting the community's isolation, relatively small size and limited incomes. 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 by oil sands developers and the development of the ACFN Group of Companies and the MCFN Group of Companies. No more than 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.

The Municipality owns a number of lots in the hamlet and is considering auctioning off some of them to increase the number of private lots and houses.

### 4.4.1.3 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 2011 was \$735,000, while one-bedroom apartment rents were averaging \$1,700 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.

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. 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 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, currently vacant, to assisted living units, which are required.

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. More recent estimates place the proportion closer to 50%. 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 MacKay and Fort Chipewyan, and tends to manifest itself as individuals staying with family and friends.

## 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 JME project will not be a sizeable driver of population growth in the region. Population growth related to the Project is expected to be accommodated in the urban service area, accounting for 7.5% of growth in the next 10 years. Housing in Fort McMurray, including housing for Aboriginal persons and families is likely to remain relatively

expensive. 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.

The Project is not expected to have a substantial direct population effect and thus housing effect on Fort MacKay or Fort Chipewyan. The Project will expand the employment and contracting opportunities for Fort MacKay 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 near Fort MacKay may limit the need for community members to move away in search of employment, 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)

The information on housing 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. New land releases and housing construction in Parsons Creek and Saline Creek Plateau will help to relieve some pressure. For those persons, including Aboriginal persons, who work in the oil sands industry, the cost of housing is offset in 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/out arrangements, income levels are expected to rise, creating the conditions for private housing development. Lot availability and construction capacity remains an issue 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.

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 avoid the high housing costs in Fort McMurray and have more opportunity to pursue traditional pursuits.

## 4.5 Education

### 4.5.1 Situation Analysis

#### 4.5.1.1 Education Attainment Levels

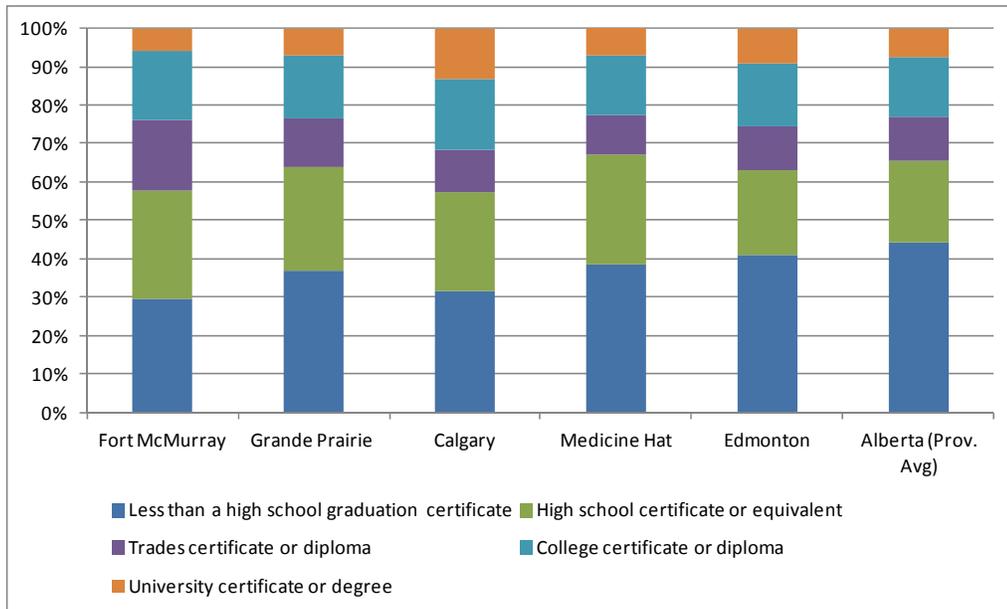
Figure 4.10 provides a breakdown of education attainment levels for the Aboriginal identity population in Fort McMurray and other urban centres in Alberta. The data shows that, as compared to other urban centres, the proportion of the Aboriginal identity population in Fort McMurray with:

- a high school diploma or equivalent is comparable;
- a trades certificate or diploma is higher;
- a college certificate or diploma is comparable;
- 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 is biased towards trades-related skills.

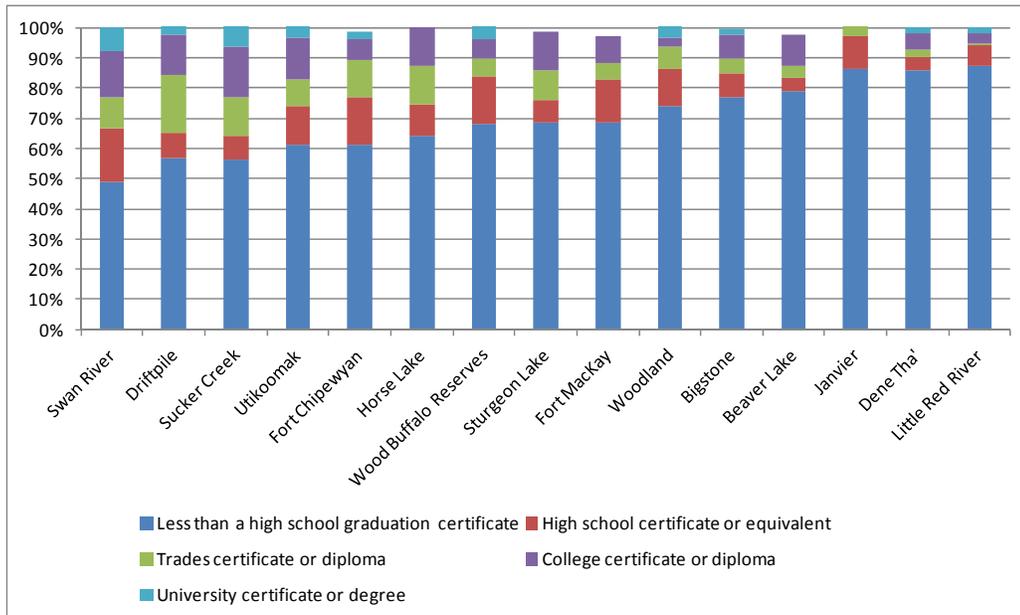
Figure 4.11 provides a comparison of educational attainment levels for the Aboriginal identity population in rural communities and reserves near or north of Fort McMurray to other Treaty 8 communities in Alberta. This data shows that the Aboriginal population in Fort MacKay, Fort Chipewyan and select Wood Buffalo reserves has comparable education attainment levels to other Treaty 8 communities in Alberta.

**Figure 4.10 Education Attainment Levels for the Aboriginal Identity Population 15 Years of age and Over (2006): Urban Communities**



Source: Statistics Canada. 2007. 2006 Aboriginal Population Profile. 2006 Census.

**Figure 4.11 Education Attainment Levels for the Aboriginal Identity Population 15 Years and Over (2006): Rural Communities**



Source: Statistics Canada. 2007. 2006 Aboriginal Population Profile. 2006 Census.

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.

#### 4.5.1.2 Service Delivery

Table 4.5 provides an overview of current education services in Fort McMurray, Fort MacKay and Fort Chipewyan. Most services offered are open to all members of the community, regardless of First Nation membership or Métis association.

**Table 4.5 Current Education Services**

Fort McMurray	Fort McKay	Fort Chipewyan
<ul style="list-style-type: none"> <li>• 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 12 schools and has an enrolment of about 5,300 students as of the 2010/2011 school year.</li> <li>• 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 4,200 students and operates nine schools.</li> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• The Fort McKay School, which is part of the Northlands School Division No. 61, provides kindergarten to Grade 9 instruction in the community. High school students either attend schools in Fort McMurray or pursue distance education through the E-learning program in the community.</li> <li>• Keyano College also operates a learning centre in the community. 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.</li> </ul>	<ul style="list-style-type: none"> <li>• The Athabasca Delta Community School, which is part of the Northlands School Division No. 61, provides kindergarten to Grade 12 instruction to over 200 students in the community. Junior and senior students can also enrol in industrial arts, home economics and food studies, and computer courses.</li> <li>• Although present in the community for many years, Keyano opened a new 800 square-meter campus in Fort Chipewyan. Industry donors for the campus included Shell, Total E&amp;P, Enbridge, and Imperial Oil. The Fort Chipewyan campus offers credited adult upgrading programs, as well as access to distance education learning opportunities.</li> <li>• 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).</li> </ul>

According to Accountability Pillar Survey results from Alberta Education, 80% of teachers, parents and students surveyed in the Northlands School Division, which serves the communities of Fort MacKay and Fort Chipewyan, were satisfied with the overall quality of basic education (AE 2011). This compares to 86% and 89% in the Fort McMurray public and separate school systems, and 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. 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).

The delivery of education services in Fort MacKay 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 school staff.

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. The cost of housing continues to be a challenge in attempting to attract and retain staff (FMPSD 2010; FMCS D 2011).

Similarly to other public services, there is a need for 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. Finding ways 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, as well as provided financial assistance to Aboriginal students pursuing post-secondary education.

### 4.5.1.3 Aboriginal Student Performance

Table 4.6 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 MacKay and Fort Chipewyan, have poorer results than Aboriginal students in Fort McMurray and poorer results than the provincial average for all Aboriginal students.

**Table 4.6 Accountability Pillar Survey Results**

Measure	FMCS <sup>1</sup>	FMP <sup>2</sup>	NSD <sup>3,4</sup>	Alberta Average	Alberta Average
	Aboriginal Students (%)				All Students (%)
Drop Out Rate	4.7	5.4	15.1	10.4	4.2
High School Completion Rate (3 yr)	77.6	52.0	13.5	38.2	72.6
Provincial Achievement Test Results (Grades K-9) (Acceptable or Excellent)	83.2	83.2	40.0	64.1	98.9

Sources: Fort McMurray Catholic Schools, Combined 3-Year Education Plan and Annual Education Results Report (AERR) for School Authorities (2011-2014). Fort McMurray Public School District, Annual Education Results Report (2011/2012); Northland School Division. Combined Three Year Education Plan and Annual Education Results Report (2011-2014).

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 MacKay and Fort Chipewyan.

### 4.5.1.4 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. 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.

- Dealing with a new environment and discrimination for Aboriginal students from outlying communities who attend high school in the urban area. Fort McKay students who commute on a daily basis also face long days on the bus with little opportunity to engage in after-school activities.
- Uneven access to funding sources across Aboriginal groups. For example, Métis students are not eligible for AANDC post-secondary education funding (Taylor 2009).
- The availability of industry-related employment points out the importance of education, especially high school. However, there still appears to be less focus on post-secondary studies and a lack of career development opportunities for Aboriginal youth (Taylor 2009).

## 4.5.2 Effects Assessment

### 4.5.2.1 Project Effects

The effect of Shell's JME 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.

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;
- supporting other Aboriginal education initiatives identified by schools in Fort Chipewyan, Fort MacKay and Fort McMurray;
- Keyano College, through financial donations;
- Aboriginal scholarships through contributions to the National Aboriginal Achievement Foundation and supporting environmental education of Aboriginal students in the region;
- initiating the Aboriginal Talent Pipeline project;
- delivering drilling rig and driver training in Fort Chipewyan;
- sponsoring delivery of the Building Environmental Aboriginal Human Resources (BEAHR) program in Fort Chipewyan.

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

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 have the potential to benefit Aboriginal and non-Aboriginal students alike. More generally, education services are delivered on the community level and, in the case of Aboriginal people in Fort McMurray, 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.

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 updated 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 much better position to deal with this 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.

### 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 MacKay, these concerns are driven by the fact that some Fort MacKay 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.
- For Fort Mackay residents, the large number of people living and working nearby in work camps causes additional stress among residents and affects their sense of safety and well-being.

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 Mackay. 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 (Durant 2012, Pers. Comm.). There are four policing positions dedicated to Fort MacKay, 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. The Fort Chipewyan detachment reports resourcing can be an issue with officer absences due to training affected by travel time (Klenk 2012, Pers. Comm.).

According to the detachment in Fort McMurray, criminal activity in the region has declined since 2009. In Fort MacKay domestic violence and substance abuse-related issues tend to be the majority of police calls (Durant 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, aging of the population and out-migration by younger members, and strong collaboration efforts within the community to address issues (Klenk 2012, 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 (Durant, Klenk, Pers. Comm. April 2012).

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 MacKay 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 MacKay 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 places increased demands on regional policing and raises 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.

- increasing financial support towards police officers 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 JME 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 MacKay 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 a full-service on-site camp, 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.

Population growth assumed under the updated 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 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

## 5. After Reclamation

### 5.1 Project Effects

Except for reclamation activities, the key socio-economic drivers of the Project operations effect (i.e. employment creation, changes in access to the land, and the changes to air and water quality and quantity) 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. Moving from operations to reclamation only will reduce the scale of ongoing work and give it a more environmental focus. These elements and the engagement of the First Nations and Aboriginal Groups in end land use planning may favour local First Nations and Métis companies, especially those based in Fort McKay, the community closest to the Project.

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.

The ongoing socio-economic effect of the Project after reclamation is expected to be small and related to the ongoing monitoring work only:

- 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 stresses 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 opportunity with the proviso that post-closure work may well have a higher involvement of Aboriginal people and companies than normal Project operations. The after reclamation landscape is also expected to allow for the re-establishment of traditional land uses.

The socio-economic effect of the cessation of mining and reclamation activities by the Project on the regional economy and communities is discussed in qualitative terms below.

## 5.2 After Reclamation Management

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 human resource elements of 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;
- draw upon the industry's experience with mine closures.

## 5.3 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 (see, 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 JME 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 JME 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 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.

The observation that the regional socio-economic landscape after reclamation of the JME Project is subject to substantial uncertainty and beyond the range of most service providers' planning horizon, also holds for the socio-economic position of the First Nations and the Aboriginal Groups in the region.

## 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 felt through socio-economic pathways, such as changes in regional population, or increased access to employment and business opportunities. Some are felt via environmental effects, such as the reduction of land on which to practice traditional pursuits.

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 First Nation 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 sections 4.2.1.4, 4.3.1.3, and 4.4.1.1 the Aboriginal people and communities in the region lead many other Aboriginal communities in terms of income, community well-being index, and housing quality and quantity. However, they trail the population as a whole. As shown in section 4.5.1.3, the data on educational attainment is mixed. Aboriginal student 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 area areas of the province.

Work done by the ATC and others note the central importance of education and training in order for individuals to benefit from available job and other opportunities. They also note existing barriers (see for example ATC 2006, Taylor 2009). Ongoing and continuing education and training initiatives will position more Aboriginal people to take advantage of the opportunities provided by the wage economy expansion. This and other broader societal influences will change the First Nations and other Aboriginal groups in the region. Shell's and more generally the oil sands industry's engagement with the First Nations and Aboriginal Groups in the region will have given them more capacity than they would otherwise have had to engage in a positive way with the change.

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 JME 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:

- providing support for local community initiatives (e.g. financial and in-kind contributions to social groups, education institutions, and health care providers), where appropriate,
- complementing existing regional resources with in-camp security and on-site health services,
- 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 MacKay are expected to be negligible.

## 7. References

### 7.1 Works Cited

- ACFN 2011 Athabasca Chipewyan First Nation. *Integrated Knowledge and Land Use Report and Assessment for Shell Canada's Proposed Jackpine Mine Expansion and Pierre River Mine*. Prepared and authored by Craig Chandler (Ph.D.) and the Firelight Group Research Cooperative on behalf of ACFN. April 20, 2011.
- ACFNBG 2011 ACFN Business Group Website.
- ACYS 2009 Alberta Children and Youth Services. 2009. *Space Creation Funding*. Available at: <http://www.child.alberta.ca/home/1157.cfm>. Accessed March, 2011.
- AE 2011 Alberta Education. 2011. October 2011 Accountability Pillar Summaries for Alberta School Jurisdictions. Available at: <http://education.alberta.ca/apps/accountability/schoolauthorities.asp?type=byname&year=2011> Accessed 2012.
- AFE 2010 Alberta Finance and Enterprise. *2010 Alberta Spatial Price Survey*. September 2010.
- AHS 2010a Alberta Health Services. 2010. 2009/10 Annual Report.
- AHS 2010b Alberta Health Services. 2010. Alberta Health Services Performance Report: September 2010.
- AHS 2011 Alberta Health Services newsrelease June 28,2011, available at: <http://www.albertahealthservices.ca/5199.asp>
- AHUA 2009 Alberta Housing and Urban Affairs. 2009. *Government Invests in Infrastructure for Oil Sands Expansion - \$241 million Will Help to Create Two New Communities in Fort McMurray*. Press release dated September 26, 2009.
- AHW 2012 Alberta Health and Wellness. *Interactive Health Data Application*. Available at: [http://www.ahw.gov.ab.ca/IHDA\\_Retrieval/selectCategory.do](http://www.ahw.gov.ab.ca/IHDA_Retrieval/selectCategory.do)
- AMA 1975 Alberta Municipal Affairs. 1975. *Fort McMurray Census 1975*
- AMA 1980 Alberta Municipal Affairs. *Fort McMurray Census 1980*

- AOSERP, 1979 Alberta Oil Sands Environmental Research Program. August, 1979. *Overview of Local Economic Development in the Athabasca Oil Sands Region Since 1961*. Peter C. Nichols & Associates Ltd.
- ATC 2006 Athabasca Tribal Council 2006 *All Parties Core Agreement Sustainable Employment Committee, 2006 Labour Pool Analysis*.
- ATC 2009a Athabasca Tribal Council. *Athabasca Chipewyan First Nation*. Available at: <http://atc97.org/first-nations/athabasca-chipewyan-first-nation>
- ATC 2009b Athabasca Tribal Council. *Fort McMurray No. 468 First Nation*. Available at: <http://atc97.org/first-nations/fort-mcmurray-no-468-first-nation>
- CBJ 2011 Canadian Business Journal. *ACFN Business Group*. October 2011.
- CIHI 2006 Canadian Institute for Health Information. 2006. *How Healthy Are Rural Canadians? An Assessment of Their Health Status and Health Determinants*. September 2006.
- CPRN 2006 Canadian Policy Research Networks. 2006. *Frontline Health Care in Canada: Innovations in Delivering Services to Vulnerable Populations*. September 2006.
- FMcFN 2006 Fort McMurray No. 468 First Nation (FMcFN). 2006. NISTAWAYAW “Where the Three Rivers Meet”: Traditional Land Use Study. Prepared for Chipewyan Prairie Dene First Nation. Prepared by Fish Creek Consulting.
- OSDG 2009 Oil Sands Developers Group. *Aboriginal Peoples and Oil Sands Development in the Wood Buffalo Region Fact Sheet*. October 2009.
- FCM 2012 Fort Chipewyan Métis Local 125. Website. *Group of Companies*. Available at: <http://fortchipewyanMétis.net/about-us/group-of-companies/>
- FMFN 2012a Fort McKay First Nation Website. Health Services. Available at: [http://www.fortmckay.com/residents\\_health.html](http://www.fortmckay.com/residents_health.html)
- FMFN 2012b Fort McKay First Nation Website. Community Resources and Support Services. Available at: [http://www.fortmckay.com/residents\\_community\\_wellness.html](http://www.fortmckay.com/residents_community_wellness.html)
- FMGOC 2010a Fort McKay Group of Companies. *2010 Annual Report*.
- FMGOC 2010b Fort McKay Group of Companies Website.

- FMIRC 2010 Fort McKay Industry Relations Corporation. 2010. *Cultural Heritage Assessment Baseline Pre-development (1960s) to Current (2008)*. March 2010.
- FNIGC 2011 First Nations Information Governance Centre. 2011. *First Nations Regional Health Survey: Phase 2 (2008/10). Preliminary Results*.
- FNIH 2010a First Nations and Inuit Health (Health Canada). *Alberta Region Programs and Services*. 2010.
- FNIH 2010b First Nations and Inuit Health (Health Canada). *Health Determinants for First Nations in Alberta: 2010*.
- GOA 2007a Government of Alberta. 2007. *Cost of living allowances extended to all employees of provincially funded organizations in Fort McMurray* (Press Release). June 19, 2007. Available at: <http://www.gov.ab.ca/home/NewsFrame.cfm?ReleaseID=/acn/200706/216964570EB55-F67F-68C4-FB42ABCC0BF98690.html> Accessed 2008.
- GOA 2011 Government of Alberta. 2011. *Comprehensive Regional Infrastructure Sustainability Plan for the Athabasca Oil Sands Area*. May 2011.
- Health Canada 2011 Health Canada. *First Nations Health Status Report – Alberta Region 2009-2010*. 2011
- IEA 2011 International Energy Agency, *World Energy Outlook, 2011, Fact Sheet*.
- IC 2012 Industry Canada. *Mikisew Group of Companies - Complete Profile*. Available at: <http://www.ic.gc.ca/app/ccc/srch/nvgt.do?lang=eng&prtl=1&sbPrtl=&stblmntNo=234567138353&profile=cmpltPrfl&profileId=501&app=sold>
- MES 2012 Mikisew Energy Services Website.
- MCFN 2009a Mikisew Cree First Nation Website. *Who We Are*. <http://www.mikisew.org/who-we-are.html>
- MCFN 2009b Mikisew Cree First Nation Website. *Social Enhancement*. <http://www.mikisew.org/programs-services/social-enhancement.html>
- MCFN 2009c Mikisew Cree First Nation Website. *Elders Program*. <http://www.mikisew.org/programs-services/elders-program.html>
- MCFN 2009d Mikisew Cree First Nation Website. *Education*. <http://www.mikisew.org/programs-services/education.html>
- MCFN 200e Mikisew Cree First Nation Website. *Employment Services*. <http://www.mikisew.org/programs-services/employment-services.html>

- MCFN 2012 Mikisew Cree First Nation. *Mikisew Cree First Nation Indigenous Knowledge and Use Report and Assessment for Shell Canada's Proposed Jackpine Mine Expansion, Pierre River Mine, and Redclay Compensation Lake*. Prepared and authored by Craig Chandler (Ph.D.) and the Firelight Group Research Cooperative. February 15, 2012.
- MGOC 2012 Mikisew Group of Companies Website.
- NCCAHA 2009 National Collaborating Centre for Aboriginal Health. *Health Inequalities and Social Determinants of Aboriginal Peoples' Health*. 2009.
- Nichols 2008 Nichols Applied Management. *Final Report, Mobile Workers in the Wood Buffalo Region*. December 2007
- NSD 2010 Northland School Division No. 61. 2010. The Northland School Division Inquiry Team Report. November 2010
- NSD 2011 Northland School Division No. 61. 2011. Northland Community Engagement Team: Terms of Reference. Available at: [http://www.northland61.ab.ca/documents/Terms\\_of\\_Reference.pdf](http://www.northland61.ab.ca/documents/Terms_of_Reference.pdf) Accessed 2012.
- OSDG 2011 Oil Sands Developers Group. 2011. *The OSDG 2011 Survey Results*. May 2011.
- RMWB 2010 Regional Municipality of Wood Buffalo. 2010. Rural Service Delivery Review. March 2010.
- RMWB 2011 Regional Municipality of Wood Buffalo. 2011. Municipal Development Plan (MDP).
- RSCEP 2010 Royal Society of Canada Expert Panel. 2010. *Environmental and Health Impacts of Canada's Oil Sands Industry*. December 2010.
- StatsCan 2007 Statistics Canada. 2007. *2006 Aboriginal Population Profile*. 2006 Census
- StatsCan 2009 Statistics Canada. Canadian Community Health Survey. 2009.
- StatsCan 2010 Statistics Canada. 2010. Small Area Taxfiler Data, 2008.
- StatsCan 2011a Statistics Canada. 2011. Canadian Vital Statistics, Death Database and Demography Division (population estimates), 2005/2007.
- StatsCan 2011b Statistics Canada. 2011b. Vital Statistics, Birth and Death Databases, 2005/2007.
- Taylor 2009 Taylor, Alison; Friedel, Tracy L.; Edge, Lois. 2009. *Pathways for First Nation and Métis Youth in the Oil Sands*. Canadian Policy Research Networks. April 2009.

## 7.2 Personal Communications

Davis-Herbert, C. Dean of Lifelong Learning, Keyano College. April 2012.

Dardis, P. Realtor, Fort McMurray Real Estate. April 2012.

Koch, D. Executive Director of Public Health, Primary Care and Chronic Disease Management, Alberta Health Services, North Zone. April 2012.

Durance, K. Staff Sergeant, RCMP Fort McMurray Detachment. April 2012.

Jacobs, E. Acting Manager, RMWB Aboriginal and Regional Relations. April 2012.

Klenk, R. Sergeant, RCMP Fort Chipewyan Detachment. April 2012.

Lutes, B. President, Wood Buffalo Housing and Development Corporation. April 2012.

Meagher, P. Associate Superintendent, Fort McMurray Public School District. March 2012.

McDougall, J., Teacher and Aboriginal Liaison, Fort McMurray Public School District, Fort McMurray Composite High School. April 2012.

Ryan, R. Principal, Northlands School Division No. 61, Fort McKay School. March 2012.

## 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.

Athabasca Chipewyan First Nation IRC (ACFN IRC). 2010. *Review of the Socio-economic and Traditional Land Use Assessment for the Shell Canada Energy Applications for Approval of the Jackpine Mine Expansion and Pierre River Mine*. Prepared by Twin River Consulting. February 11, 2010.

Athabasca Chipewyan First Nation (ACFN). 2011. *Integrated Knowledge and Land Use Report and Assessment for Shell Canada's Proposed Jackpine Mine Expansion and Pierre River Mine*. Prepared and authored by Craig Chandler (Ph.D.) and the Firelight Group Research Cooperative on behalf of ACFN. April 20, 2011.

Clearwater Media. *Tipping Point: The Age of the Oil Sands* (Film). 2011. Available at: <http://www.cbc.ca/documentaries/natureofthings/2011/tippingpoint/>

- Fort Chipewyan Métis Local 125. 2010. *5-Year Strategic Plan*.
- Fort McKay IRC. 2006b. *Fort McKay Community Plan: Our Community Our Future. A Resurvey*.
- Fort McKay Industry Relations Corporation (FMIRC). 2009. *Shell Canada Limited (Shell) Pierre River Mine Project and Jackpine Mine Expansion Project: Socio-Economic Impact Assessment (SEIA) Review*. Prepared by Molstad and Anderson Consultants Inc. November 2009.
- Fort McKay Industry Relations Corporation (Fort McKay IRC). 2010. *Cultural Heritage Assessment Baseline Pre-development (1960s) to Current (2008)*. March 2010.
- Fort McKay IRC. 2010. *Project-Specific Cultural Heritage Assessment*. Prepared for Shell's Proposed Pierre River Mine and Jackpine Mine Expansion, as part of the Fort McKay Specific Assessment. March 2010.
- Government of Alberta. 2007. *Funding for Fort McMurray helps meet urgent needs brought on by oil sands growth*. Press release dated February 26, 2007.
- Government of Alberta. 2008. *Government of Alberta fulfills Radke Report infrastructure recommendations for the Regional Municipality of Wood Buffalo* (Press Release). January 31, 2008. Available at:  
<http://alberta.ca/home/NewsFrame.cfm?ReleaseID=/acn/200801/23035D22E3654-AA46-2CA3-B39B0568D19627DF.html>
- Government of Alberta. 2009. *Responsible Actions: A Plan for Alberta's Oil Sands*. February 2009.
- Government of Alberta. 2011. *Comprehensive Regional Infrastructure Sustainability Plan (CRISP) for the Athabasca Oil Sands Area*.
- McKay Métis Nation – Local 63. 2010. *5 Year Strategic Plan*.
- Mikisew Cree First Nation IRC (MFCN IRC). 2009. *Socio-Economic Review of the Applications for Approval of the Jackpine Mine Expansion and Pierre River Mine of Shell Canada Energy*. Prepared by Twin River Consulting (Dr. James Tanner). May 31, 2009.
- Mikisew Cree First Nation (MCFN). 2011. *Mikisew Cree Use of Lands and Resources in the Vicinity of the Proposed Shell – Jack Pine and Shell – Pierre River Operations*. Prepared by Peter Douglass Elias, PhD. January 17, 2011.
- Oil Sands Ministerial Strategy Committee. 2006. *Investing in Our Future: Responding to the Rapid Growth of Oil Sands Development*, December 2006
- Regional Municipality of Wood Buffalo (RMWB). 2008. *Fort MacKay: Where We Are Today*. May 2008.

RMWB 2008. *Fort Chipewyan: Where We Are Today*. May 2008.

RMWB 2010. Regional Municipality of Wood Buffalo. 2010. Municipal Census.

RMWB. 2010. *Rural Service Delivery Review*. March 2010.

RMWB. 2011. *Heading Home: The Right Thing To Do. 10 Year Plan to End Homelessness 2010-2020*.

RMWB. 2011. *Municipal Development Plan (MDP)*. October 2011.

Statistics Canada. 2007. *How Statistics Canada Identifies Aboriginal Peoples*. Minister of Industry. June 2007.