

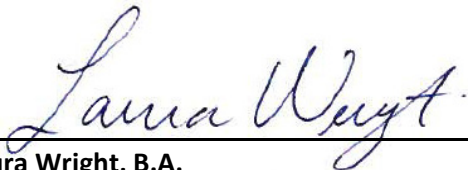
**SOCIO-ECONOMIC BASELINE REPORT
CANADIAN NATURAL RESOURCES LIMITED
KIRBY IN SITU OIL SANDS EXPANSION PROJECT**

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Canadian Natural Resources Limited (Canadian Natural) is seeking regulatory approval for the proposed Kirby In Situ Oil Sands Expansion Project (the Project). The Project is located primarily within the Regional Municipality of Wood Buffalo (RMWB) and with minor portions of the Lac La Biche County. The Project is proposed within a Lease Area situated in Townships 73-75, Ranges 7-9, West of the Fourth Meridian and about 10 km south of Conklin, Alberta.

The Project application will propose Steam Assisted Gravity Drainage (SAGD) to extract the bitumen. The Project is expected to have a production capacity of 140,000 barrels of oil per day, up to three phases and a project life of up to 30 years. The Project require other related infrastructure, including electrical power lines, fuel gas pipelines, diluent supply pipelines, produced oil pipelines and salt caverns.

This Socio-Economic Baseline Conditions section is part of the Environmental Impact Assessment (EIA) for the Project. The objective of the Baseline Conditions section is to describe the existing economic and social conditions in the communities of the Regional Study Area (RSA) as per the Terms of Reference (TOR) for the Project. The data collected for the Baseline Conditions were used to complete the Socio-Economic Impact Assessment Report. The Baseline Conditions describes existing socio-economic conditions in the RSA.

The RSA is the area within which there is the potential for cumulative and socio-economic effects and that will be relevant to the assessment of wider-spread effects of the Project. The RSA for the Project is primarily based on the municipal boundaries of the southern portion of the Regional Municipality of Wood Buffalo (RMWB) and Lac La Biche County with the exception of the Cold Lake Air Weapons Range. Conklin, the closest community to the Project, is located approximately 35 km north of the Project Lease Area. Other communities in the RSA include:

- Fort McMurray;
- Anzac;
- the Fort McMurray #468 First Nation (FMFN) reserve #176 at Willow Lake;
- Gregoire Lake Estates;
- Janvier and the Chipewyan Prairie Dené First Nation (CPDFN) reserve #194 at Janvier;
- the Heart Lake First Nation reserve #167;
- the Hamlet of Lac La Biche; and

- Beaver Lake Cree First Nation reserve #131.

The RSA was chosen to include communities where positive and negative effects of permanent and temporary population change, construction traffic and workforce movement, and regional economic impact are expected to result from the Project. The socio economic variables used to describe baseline conditions and potential effects are:

- historical and economic context;
- population;
- economy;
- local government responsibilities;
- housing;
- educational infrastructure;
- medical facilities and services;
- emergency and protective services;
- social services;
- physical infrastructure;
- recreation; and
- regional traffic and roads.

The estimated population of the RSA in 2011 is 112,025. Population in the RSA has increased in all communities in the nine years between 2002 and 2010; however, the rate of increase in many communities has slowed down in the past few years. In 2006, the population of residents under the age of 75 in the RMWB and Lac La Biche County (formerly Lakeland County) was approximately 53% male and 47% female, which reflects the trend for the province as a whole. The median age throughout the RSA is generally lower than the rest of the province, with the exception of Lac La Biche County. Since 2000, the workcamp population in the RMWB has increased by 295%; however, between 2008 and 2010 there was a decrease of 11.3% (RMWB 2010a).

The economy of the RSA is centered on resource extraction industries. Key economic activities include oil sands development, oil and gas exploration and extraction, forestry, tourism, and agriculture.

The labour force in the RSA is distributed across a number of industries, including oil and gas, forestry, agriculture, educational and health services. The oil sands and natural gas sectors sectors have been a key employer of workers

and businesses in the RSA, including the First Nations communities, for several years. Other industries that are larger employers in the RSA include construction, health services, business services, retail and education services. The occupational distributions of the RSA vary in the communities and in some cases are different than the provincial averages.

The level of educational attainment in the RSA is comparable to provincial averages in the RMWB and Lac La Biche County, but is lower in reserve communities. The percentage of the RSA population with an apprenticeship or trades certificate is higher than in the provincial average. Median earnings and income in the RMWB are well above the rest of the RSA and the province.

The workforce participation rate in 2006 in the RMWB was above the provincial average. In Lac La Biche County the participation rate was comparable to the province. The unemployment rates in the RMWB and Lac La Biche County were similar to the provincial statistics for 2006. Participation rates were lower and unemployment rates were higher at Beaver Lake, FMFN at Gregoire Lake and CPDFN at Janvier than the rest of the RMWB, Lac La Biche County and the province.

The RMWB provides local municipal governance and planning and administrative functions for Fort McMurray and the rural communities within the municipal boundaries. The land surrounding Fort McMurray and the rural communities is held by the Government of Alberta and release of land occurs through negotiation between the RMWB and Government of Alberta. The RMWB has struggled over the past decade to provide services and infrastructure to the communities with continually high growth. The slowing of the growth rate since 2008 has given the RMWB a chance to catch up on delivery of the municipal infrastructure and services and they now have the capacity to plan for future growth.

Demand and prices for housing throughout the RMWB are high primarily due to the level of population growth and limited supply. The housing market is constrained by a number of factors that contribute to high prices and limited availability. Affordable housing is mandated in each new housing development and administered by the Wood Buffalo Housing and Development Corporation (WBHADC).

Education in the RMWB is provided through the Northland School Division, the Fort McMurray Public School Division (FMPSD) and the Fort McMurray Catholic School Division (FMCSA). Post-secondary education in the RMWB is provided primarily by Keyano College which serves Fort McMurray as well as the rural communities. The focus of the college has been vocational training in trades and

heavy industry. The college works closely with oil sands companies to ensure programs are geared to job opportunities in the region.

The provision of health care services for the RMWB is the responsibility of Alberta Health Services (AHS). For the RMWB, the centre of health care provision is the Northern Lights Health Centre (NLHC) in Fort McMurray. The NLHC has 105 beds and is typically at 75% to 100% occupancy. The NLHC is currently upgrading their emergency room and is planning construction of a new 100 bed long term health care facility, expected to be completed in 2015. Concerns in health care for the NLHC include a shortage of doctors, lack of capacity for neonatal care, and attracting and retaining qualified personnel.

Policing is provided to the RMWB by the Royal Canadian Mounted Police (RCMP) Wood Buffalo detachment. The Fort McMurray Fire Department provides firefighting and ambulance services to both the rural and urban communities in the RMWB. Emergency Medical Services (EMS) are provided in Fort McMurray and in the rural communities. Forest fire protection and suppression is provided by the Forest Service Division of Alberta Sustainable Resource Development (ASRD). In Alberta, initial response to a disaster or emergency situation is the responsibility of the municipality involved, as set out in provincial legislation. Therefore, the RMWB is responsible for disaster prevention and emergency response planning and has a Municipal Emergency Plan. Concerns of the municipality include adequate planning of transportation safety on high use major transportation corridors, as there are only two highways into the RSA from the south and one of them passes through the community of Fort McMurray.

Social services in the RMWB are delivered through the combined efforts of municipal and provincial governments, independent public agencies (i.e., school boards, regional health authorities), non-profit community organizations, and private companies. These organizations provide a wide range of services in response to social, psychological, employment, income, and crisis needs of residents. Demand is high, but manageable, for social services in the RMWB. There are limits to the social services framework in the community. Social service agencies find the cost of housing and the high wages offered by oil sands companies a deterrent to attracting and retaining employees for their own agencies. Additionally, costs of office space and program delivery are higher in the RMWB than the rest of the RSA.

The RMWB is responsible for providing physical infrastructure for the communities within the municipality. The 2011 budget for capital projects in the RMWB is approximately \$315 million, of which approximately \$215 million is allocated for public facilities, \$15 million for recreation and culture and \$85 million

for transportation (RMWB 2011b). Some of the capital budget challenges facing the RMWB include keeping pace with growth, maintaining the existing capital infrastructure, dealing with increasing capital construction costs, and providing an appropriate balance between infrastructure services and quality of life services (RMWB 2011h, internet site).

The RMWB is responsible for providing recreation facilities to each of the communities within the municipality. The RMWB provides parks and recreation projects (including trails, playgrounds and parks, sports fields, rinks and green spaces) and culture projects (including museums, cemeteries and other cultural facilities) to the communities.

Lac La Biche County was created after the Town of Lac La Biche and Lakeland County amalgamated. The Hamlet of Lac La Biche is the main service centre for Lac La Biche County including provincial government services, education, health and social services, RCMP, ambulance and fire protection services.

A planning study undertaken by Lakeland County in 2006 (Urban Systems 2006) indicated that population renewal is a vital concern for the community, to encourage young members to remain or return, and to ensure that the service level demanded by an increasing recreational and retired population can be supported by a vibrant working age and permanent population. Lac La Biche County is funding a regional development corporation, made up of local stakeholders and business people, which will provide economic services to the County. One of the focuses of the regional development corporation will be to promote Lac La Biche County as a service centre to the southern SAGD producers (Coleman 2011, pers. comm.).

The development of oil sands projects around Conklin is increasing the use of Lac La Biche County as a service and staging centre for these developments. Most of the developments that identify Lac La Biche as a preferred service centre are located in the RMWB.

In the Hamlet of Lac La Biche, there is a full range of housing including single family dwellings, multi-family dwellings, affordable housing, rental accommodation and seniors accommodation. Demand for housing in Lac La Biche and the rest of the County reflects in-migration of people who work in Fort McMurray but have permanent or recreational residences in Lac La Biche, retirees from other communities, and people moving to the area for economic opportunity. Municipal records indicate that the number of new dwellings has been increasing in the County over the past three years but total housing starts have slowed.

Primary and secondary schooling from kindergarten to Grade 12 is available in Lac La Biche and Plamondon, and post-secondary schooling is delivered through Portage College. Portage College has its main campus in Lac La Biche, offering many certificate and diploma programs in nine program offerings. While enrolment at Portage College has been relatively constant over the past few years the distribution of students in each program has changed. Enrolment in academic upgrading has been steadily decreasing while enrolment in trades and technical programs has increased (Keough 2011, pers. comm.). The college is tailoring many programs so that graduates are ready to work in the growing oil sands development field.

Lac La Biche has an acute care facility; the Lac La Biche (William J. Cadzow) Healthcare Centre with 23 acute care beds. The Lac La Biche detachment of the RCMP provides policing for the County, which includes Secondary Highway 881 north of Lac La Biche to just south of Conklin. Protective Services are provided by the County and include three peace officers who respond to emergencies and assist rescue personnel. Protective Services receives emergency response plans from industrial projects and adapts them as necessary; however, no coordination of emergency response is currently taking place (Newton 2011, pers. comm.).

Lac La Biche is the provincial government delivery centre for numerous social services including mental health, child and family services, alcohol and drug abuse counselling, human resources and employment services.

Recreational infrastructure is primarily located the Hamlet of Lac La Biche but serves a wider population than just the Hamlet.

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1 SOCIO-ECONOMIC BASELINE

1.1 INTRODUCTION

Canadian Natural Resources Limited (Canadian Natural) is applying for approval of the Kirby In Situ Oil Sands Expansion Project (the Kirby Expansion Project or the Project). The applications to the Energy Resources Conservation Board (ERCB) under the Oil Sands Conservation Act, and Alberta Environment and Water (AEW) under Environmental Protection and Enhancement Act (EPEA) and Water Act as well as the Environmental Impact Assessment (EIA) are herein collectively referred to as the Application.

The proposed Project will involve bitumen production from oil sands formations within a Lease Area located in Townships 73, 74 and 75, Ranges 7, 8 and 9, West of the Fourth Meridian (W4M) and within the Regional Municipality of Wood Buffalo (RMWB). Minor portions of the proposed Project facilities will extend beyond the Lease Area boundary. The footprint includes water source and disposal wells and pipelines that extend west of the Lease Area into Lac La Biche County.

The Lease Area consists of 110.75 sections (29,143 ha) of land on which Canadian Natural fully or partially holds the oil sands exploration and development rights. To facilitate description of the expansion plans and facility locations, the Lease Area has been divided into two geographic areas, referred to as the North Expansion Area and the South Expansion Area, which are generally divided by Provincial Highway 881. The Project will be accessed via an all-weather gravel road which intersects with Highway 881, at a location approximately 35 km by road south of Conklin and 110 km by road northeast of Lac La Biche.

Canadian Natural currently has ERCB commercial scheme approvals for the following two projects:

- The Canadian Natural Kirby In Situ Oil Sands Project, hereafter referred to as Kirby South 2010 (or KS1) was approved in 2010 for bitumen production of 45,000 bbl/d (7,150 m³/d) using Steam Assisted Gravity Drainage (SAGD) technology.

The Enerplus Resources Fund (Enerplus) Kirby Oil Sands Project Phase 1, hereafter referred to as Kirby North 2010, was approved in 2010 for bitumen production of 10,000 bbl/d (1,590 m³/d), also using SAGD technology. The Kirby North 2010 oil sands leases and nearby Enerplus oil sands leases were acquired by Canadian Natural in 2010.

The Kirby Expansion Project will occur in three phases, as described below:

- Kirby North Phase 1 (KN1) will involve the expansion of the approved Kirby North Central Processing Facility (CPF) and development of facilities to increase bitumen production and processing capacity in the North Expansion Area from the approved 10,000 bbl/d (1,590 m³/d) to 50,000 bbl/d (7,950 m³/d);
- Kirby North Phase 2 (KN2) will further expand the Kirby North CPF, facilities, and bitumen production and processing capacity within the North Expansion Area from the 50,000 bbl/d (7,950 m³/d) to 80,000 bbl/d (12,720 m³/d).; and
- Kirby South Phase 2 (KS2) will involve expansion of the approved Kirby South CPF and development of facilities to allow an increase in South Expansion Area bitumen production and processing capacity by 15,000 bbl/d (2,384 m³/d) from the approved 45,000 bbl/d (7,150 m³/d) to a total of 60,000 bbl/d (9,540 m³/d) bitumen.

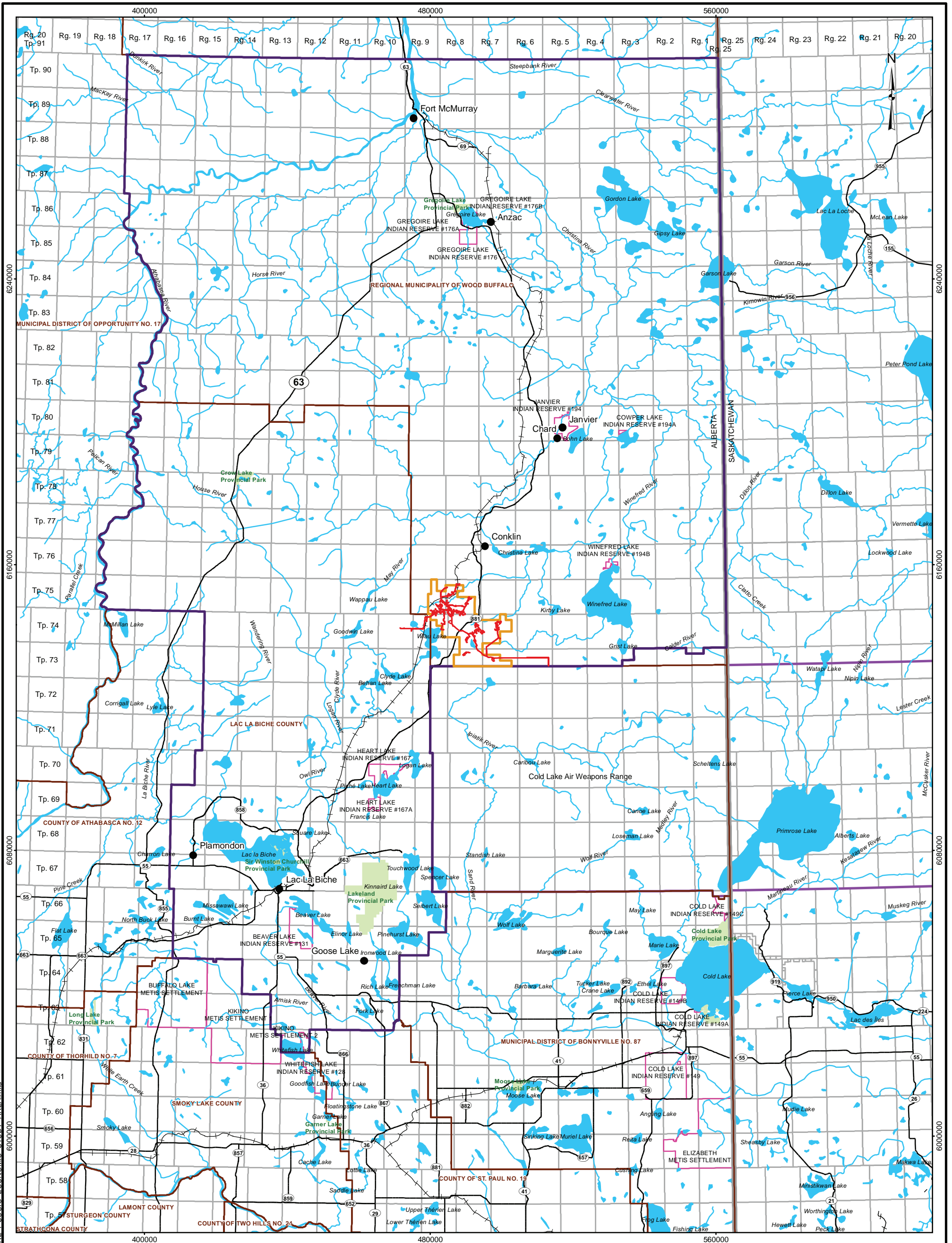
As a result of the expansion, the Kirby North CPF will have a design capacity of 80,000 bbl/d (12,720 m³/d) and the Kirby South CPF will have a design capacity of 60,000 bbl/d (9,540 m³/d), for to a total bitumen production capacity within the Lease Area of 140,000 bbl/d (22,260 m³/d). In addition, the Project will increase the combined life of Kirby lease developments from 20 years to approximately 30 years. The layout of surface facilities associated with the Project is shown on [Figure 1](#).

1.1.1 Objectives and Methods

The objective of the socioeconomic baseline report is to describe the existing economic and social conditions in the communities of the Regional Study Area (RSA), as directed by the TOR for the Project. The baseline report describes conditions as of six months prior to submission and provides the benchmark against which Project effects are estimated in the Application Case. These conditions are described for the communities of the RSA through various socio-economic variables. There are several existing and planned oil sands development projects within the RSA. The projects that are included in the Baseline Conditions, are identified in Table 1.5-1 (Volume 3, Section 1.5).

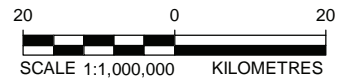
The socio-economic variables used to describe baseline conditions and potential effects are:



- historical and economic context;
- population;



- LEGEND**
- FOOTPRINT
 - KIRBY EXPANSION PROJECT AREA
**Includes oil sands leases fully and partially held by Canadian Natural*
 - SOCIO-ECONOMIC RSA
 - AIR WEAPONS RANGE
 - INDIAN RESERVE
 - MUNICIPAL BOUNDARY
 - PROVINCIAL PARK
 - OPEN WATER
 - PAVED ROAD
 - RAILWAY
 - COMMUNITY

REFERENCE
 1:50,000 BASE FEATURES OBTAINED FROM GEOBASE.
 DATUM: NAD83 PROJECTION: UTM ZONE 12



 PROJECT Canadian Natural	KIRBY IN SITU OIL SANDS EXPANSION PROJECT																				
SOCIO ECONOMIC STUDY AREA																					
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- economy;
- local government responsibilities;
- housing;
- educational infrastructure;
- medical facilities and services;
- emergency and protective services;
- social services;
- physical infrastructure;
- recreation; and
- regional traffic and roads.

1.1.2 Study Areas

The Project Lease Area is located south of Fort McMurray within the Regional Municipality of Wood Buffalo (RMWB), south of the community of Conklin (Figure 1).

The SEIA baseline conditions are described for the RSA only (AENV 2011; TOR). The RSA is delineated to include communities with potential for positive and negative socio-economic effects from the Project, accounting for regional economic centres, population centres, transportation corridors, and communities located closest to the Project. The RSA was delineated to include communities where effects of permanent and temporary population change resulting from construction spending and long term operations, construction traffic and workforce movement, and regional economic impact are expected to result from the Project.

The RSA for the Project is primarily based on the municipal boundaries of the southern portion of the RMWB and Lac La Biche County with the exception of the Cold Lake Air Weapons Range. Conklin, the closest community to the Project, is located approximately 35 km north of the Project Lease Area. Other communities in the RSA include Fort McMurray, Anzac, the Fort McMurray #468 First Nation (FMFN) reserve at Willow Lake, Gregoire Lake Estates, Janvier and the Chipewyan Prairie Dené First Nation (CPDFN) #194 reserve at Janvier, the Heart Lake #167 reserve, and the Hamlet of Lac La Biche.

Economic impact is estimated for the RSA, and it is recognized that economic impacts extend beyond the RSA to many communities throughout Alberta. Therefore, an assessment of economic effects arising from the Project is

provided for the province of Alberta, including economic effects in communities that may be adjacent to the RSA.

1.1.2.1 Temporal Considerations

The temporal scope of the SEIA reflects the timing and nature of the Project stages of construction and operations, as well as information available on other existing, approved and planned projects and activities in the RSA.

The Project life is approximately 30 years (2014 to 2043) consisting of three phases with construction of the first phase beginning in 2014 [Kirby North Phase 1 (KN1)]. The remaining two phases will consist of Kirby North Phase 2 (KN2) and Kirby South

Phase 2 (KS2). The current schedules for each of the three proposed phases are as follows:

- KN1: construction of the initial facilities is to occur from Q1 2014 to Q4 2015, operation begins Q1 2016, and the end of operation occurs in 2036 with reclamation completed by 2043;
- KN2: construction of the initial facilities is to occur from Q1 2017 to Q3 2019, operation begins Q4 2019, and the end of operation occurs in 2036 with reclamation completed by 2043; and
- KS2: construction of the initial facilities is to occur from Q3 2018 to Q3 2020, operation begins in Q4 2020, and the end of operation occurs in 2036 with reclamation completed by 2043 (i.e., 30 years after the construction start of KN1).

The overall Project schedule is outlined in Volume 1, Section 1.3.

1.2 HISTORY AND ECONOMY

1.2.1 History of the Regional Study Area

Human inhabitants have lived in the northeastern portion of Alberta for at least 10,000 years. Archaeological evidence of Aboriginal peoples is found throughout the region. Cree Burn Lake, an important historical meeting and trading place north of Fort McMurray, dates back approximately 8,000 years and has been designated a Provincial Historic Site. The traditional uses of the land include spiritual use, hunting, trapping, fishing, and food and medicinal plant gathering. These land uses are practiced by several First Nations and Métis communities in the RSA.

In the 18th century, European fur traders and explorers arrived in the area and commercial fur trading became common. Fort Chipewyan, Fort MacKay and Fort McMurray were all established as fur trading posts along the Athabasca River. Lac La Biche played a crucial role in the fur trade, as it marks one of the areas disputed between the Hudson's Bay and the Northwest Company fur traders. Portage La Biche marks a continental divide, where rivers north of Lac La Biche flow north to the Arctic ocean and rivers south of Lac La Biche flow east to Hudson's Bay, and the region was important in the transcontinental river journeys between the Atlantic and Pacific oceans.

European settlement of Lac La Biche began in 1798 when David Thompson built the Red Deers Lake House. Although David Thompson left Lac La Biche in 1799 (he returned about 12 years later), he helped identify Lac La Biche to "other explorers, fur traders, and free traders who eventually settled in the area" (Gregory 1999). Catholic missionaries established a mission and school at Lac La Biche in 1853 that operated until 1963.

Access to Lac La Biche opened up considerably in 1915 when the first locomotive on the Alberta and Great Waterways Railway stopped in Lac La Biche, effectively connecting Lac La Biche to Edmonton, Alberta (Gregory 1999). The railway eventually extended north to Lynton, just south of Fort McMurray, providing access to communities such as Conklin, Chard and Anzac.

As exploration of the Canadian north expanded, Fort McMurray became a staging location for people and freight moving north. Access to the northeast region was restricted to river, rail, foot or air travel until the 1960s when the road was constructed from Edmonton to Fort McMurray.

Lac La Biche has become a recreational destination with over 175,000 visitors annually to area lakes and recreational events. There is also an agricultural area within Lac La Biche County, primarily involving livestock and cereal production. The cultural diversity in the Lac La Biche area reflects a population of Aboriginal, French and other European heritage, as well as Lebanese heritage.

Documentation of the tar-like sands along the Athabasca River was included in the accounts of northern explorers such as Peter Pond. The focus of early oil sands production was open pit mines north of Fort McMurray, near the community of Fort MacKay. Experimentation with separating the sand from the bitumen began in the 1920s, but it took over 30 years to establish a commercial operation, in the 1960s, at the Great Canadian Oil Sands Company (now Suncor Energy Inc.) site north of Fort McMurray. Further oil sands development occurred in the late 1970s with the construction of the first Syncrude Canada Ltd. mine and plant. Oil sands development did not increase again until 1996, due to a

number of factors including cost of production, federal energy policy, price of oil, technology and royalty structures.

The early development of oil sands created a population increase in Fort McMurray from 1,200 in the early 1960s to 35,000 in 1985. Population declined slightly between 1985 and 1996. The population of the RMWB increased from almost 52,000 in 2000 to just over 104,000 in 2010 including the workcamp (or shadow) population, which was estimated at 23,325 in 2010 (RMWB 2010a). This high rate of growth caused challenges for the RMWB, specifically with municipal planning, infrastructure and housing.

Lac La Biche County has not experienced the intense growth of Fort McMurray. However, with the focus on in situ development between Fort McMurray and Cold Lake, the County will increasingly be involved in growth of oil sands developments. The tax base of the County has increased over the past few years, reflecting recent industrial developments.

From 1997 to 2009, approximately \$100 billion in capital investment and \$53 billion in operating expenditure has occurred in Alberta's oil sands with the majority of the projects located in the Athabasca oil sands area (OSDG 2011). Development has included oil sands mines and operations plants, several upgraders, development of commercial scale in situ extraction plants and the introduction of new extraction technology and facilities.

Other industries and land uses also operate in the RSA, including forest harvesting, conventional oil and gas extraction, hunting and trapping, mineral exploration, recreation, agriculture, secondary educational institutions and traditional land uses. However, the level and pace of new investment in other industries is much less than in oil sands development. The recent expansion of the oil sands extraction and upgrading industry has resulted in unique community constraints and opportunities. Ongoing coverage in national and international newspapers and magazines has brought the development of the oil sands to a worldwide audience, focusing on images and controversy over economic, social and environmental benefits and costs of oil sands development.

World economic conditions changed in late 2008 with a global restriction of credit and global recession. Under these conditions, and with a sharp decline in the price of oil, many oil sands development companies announced delays or cancellations of projects. In the fall of 2009, several oil sands companies that had delayed projects announced decisions to re-start projects. Since the 2008 start of recession, the population of the RSA has continued to grow, but the rate of increase has slowed substantially. The RMWB and the Government of Alberta

have initiated several planning strategies and projects to prepare for further growth.

1.2.2 Population in the Regional Study Area

The population of the communities in the RSA is shown in [Table 1](#). The data are summarized from the statistics gathered by the RMWB, Alberta Municipal Affairs, and Statistics Canada. Alberta Municipal Affairs publishes population data based on various sources including federal census, municipal census, and Alberta Aboriginal Relations data. The most recent federal census was completed in 2011 and Statistics Canada is currently completing the analysis of data with initial results expected in February 2012. The most recent available census data are from 2006. Since the 2006 federal census, a number of changes have occurred in the RSA including the creation Lac La Biche County in 2007 through the amalgamation of the Town of Lac La Biche and Lakeland County. Discussions with the Lac La Biche County indicate that the population of the County has increased since 2006, but an accurate census will not be available until 2012 when the 2011 census data are released.

Population in the RSA has increased in all communities in the nine years between 2002 and 2010 ([Table 1](#)). However, the rate of increase in many communities has slowed down in the past few years, likely due to the global recession. Between 2008 and 2010, the increase in population in the RMWB was 1.0%, which is much lower than the 7.4% average annual growth rate between 2000 and 2010 (RMWB 2010a).

The workcamp population in the RMWB has increased considerably over the past decade with the emergence of work camps as the dominant form of housing for construction workers and operators beginning in about 2000 (RMWB 2010a). Since 2000, there has been a 295% increase in work camp population; however, between 2008 and 2010 there was a decrease of 11.3% (RMWB 2010a). This decline was related to the global recession and resulting slowdown in oil sands development during this period (RMBW 2010a).

1.2.2.1 Age and Gender in the RSA

The age characteristics by gender in the RSA are shown in [Table 2](#) and plotted in [Figures 2](#) and [3](#). In 2006, the population of residents under the age of 75 in the RMWB and Lac La Biche County (formerly Lakeland County) was approximately 53% male and 47% female. The majority of the residents in the 75 to 84 age bracket were women. This male to female ratio reflects the same trend for the province up to the age of 65 to 74 when the trend reverses and the province has more females than males.

Table 1 Population of Communities in the Regional Study Area

Area	2002	2006	2007	2008	2010	% Increase Since 2002
Fort McMurray ^(a,d)	47,757	61,366	65,400	72,363	76,797	61
Anzac ^(a)	548	711	714	837	785	43
Conklin ^(a)	213	338	299	372	337	58
Gregoire Lake Estates ^(a)	184	285	248	253	248	35
Chipewyan Prairie Dene First Nation 470 ^(b)	305	331	332	335	344	13
Janvier ^(a) (does not include on-reserve population)	143	218	178	194	195	37
Fort McMurray First Nation 468 ^(b)	240	253	257	257	262	1
Workcamp accommodations in the RMWB ^(a,e)	8,063	10,442	18,572	26,284	23,325	189
Town of Lac La Biche ^(b)	2,776	2,776	n/a	n/a	n/a	-
Lakeland County	5,301 ^(c)	6,365 ^(c)	n/a	n/a	n/a	-
Lac La Biche County ^(b)	-	-	9,123	9,123	9,123	-
Heart Lake First Nation ^(b)	186	192	194	194	194	4
Beaver Lake First Nation ^(b)	310	339	347	351	415	34
Total RSA Population	65,716	83,616	95,664	110,563	112,025	70

^(a) RMWB 2010a.

^(b) Alberta Municipal Affairs 2011. First Nation statistics are on-reserve populations

^(c) Statistics Canada 2001, 2006a, 2006b.

^(d) Includes the shadow population (including work camp, hotel/motel and campground population) residing in Fort McMurray.

^(e) Includes workcamps north of Fort McMurray as well as south.

- = Data not available.

n/a = Not applicable due to the amalgamation of the former Town of Lac La Biche and the former Lakeland County into Lac La Biche County in 2007.

The median age throughout the RSA is generally lower than the rest of the province, with the exception of Lac La Biche County. In 2006, the working age population (age 15 to 64) in the RMWB made up a higher percentage of the total population than the provincial average. The working age population in Lac La Biche County was lower than the provincial average. In general, the population of the RSA is younger with a larger percentage of the population below 15 years of age than in the province.

Table 2 Age Characteristics by Gender in the Regional Study Area (2006)

Community	Sex	0 to 4	5 to 14	15 to 24	25 to 44	45 to 54	55 to 64	65 to 74	75 to 84	Over 85	Total	Median	% over 15
RMWB	Male	1,875	3,440	4,575	9,980	5,165	2,180	335	95	15	27,660	32.3	80.8
	Female	1,695	3,335	4,115	8,730	4,055	1,420	315	130	45	23,840	30.8	78.9
Town of Lac La Biche	Male	125	230	205	455	155	105	75	50	15	1,325	29.6	73.2
	Female	120	220	215	395	172	120	85	65	45	1,435	32.7	76.0
Lac La Biche County	Male	220	525	455	825	485	410	235	120	20	3,295	38.0	77.5
	Female	190	540	400	825	465	335	205	95	30	3,070	36.7	76.1
Beaver Lake IR 131	Male	25	40	40	55	15	15	5	0	0	190	23.1	68.4
	Female	20	50	35	45	15	10	0	0	0	190	21.0	60.5
Gregoire Lake IRs 176 and 176A	Male	5	15	25	30	5	5	5	5	0	85	28.3	88.2
	Female	10	30	15	35	5	5	5	10	0	115	24.8	65.2
Janvier IR 194	Male	15	25	25	25	15	10	10	5	0	135	28.2	70.4
	Female	10	30	25	35	15	10	5	0	0	135	25.9	70.4
Province of Alberta	Male	103,835	219,760	250,200	493,369	258,835	162,260	91,845	52,925	13,755	1,646,800	35.4	80.4
	Female	98,760	209,165	239,085	487,605	253,360	160,705	97,475	68,860	28,535	1,643,550	36.7	81.3

Note: Statistics Canada has suppressed the data for Heart Lake to further protect the confidentiality of individual respondent's personal information.

Source: Statistics Canada 2006a, 2006b.

Figure 2 Age Distribution (Male) for Communities within the RSA

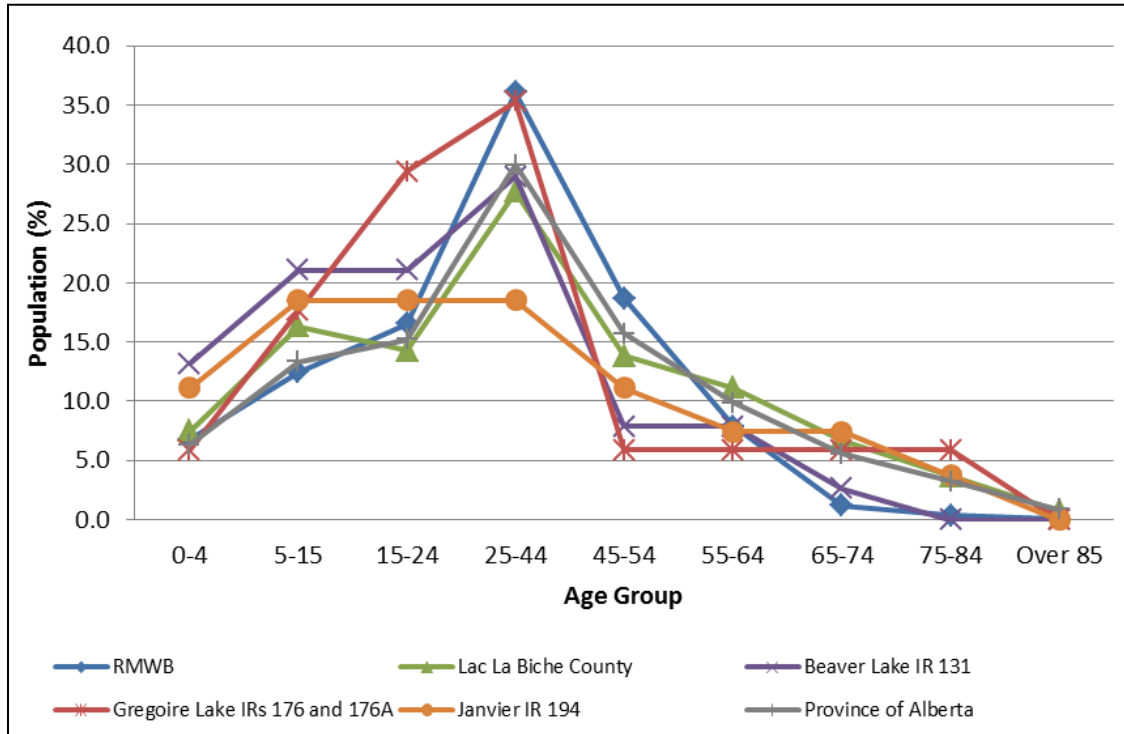
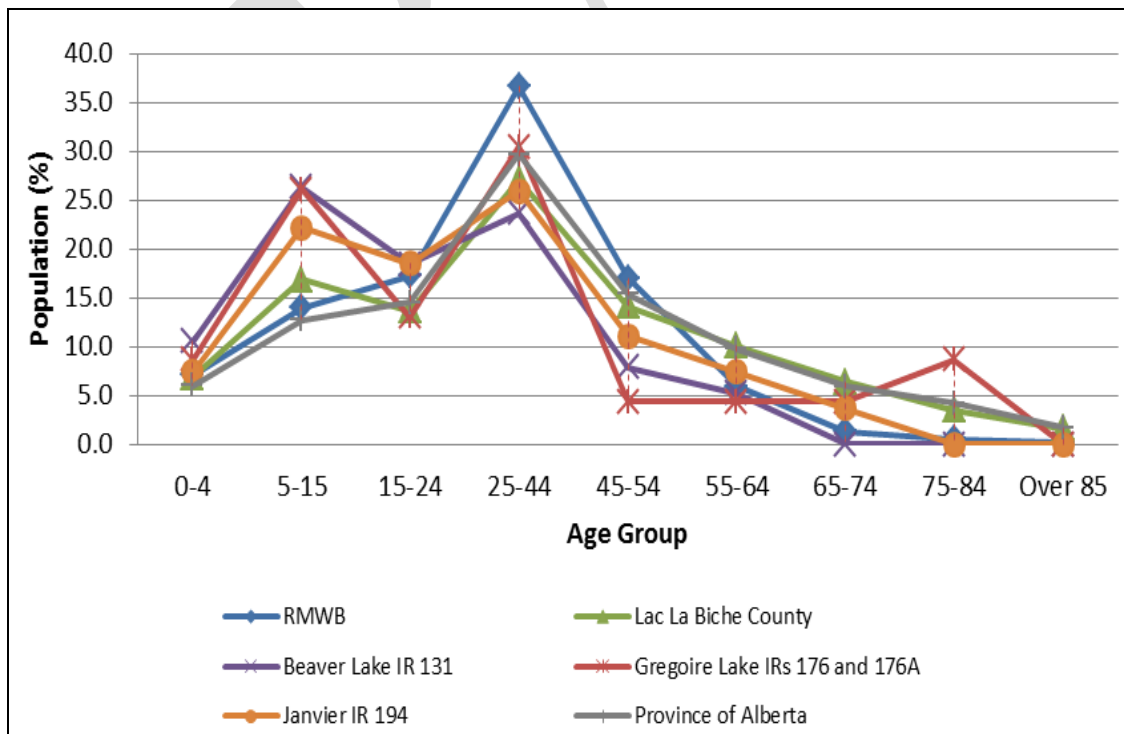


Figure 3 Age Distribution (Female) for Communities within the RSA



1.2.3 Economy

As shown in [Table 1](#), Fort McMurray and Lac La Biche County make up the majority of the population of the RSA. Data and information for smaller communities and First Nations are provided where available.

1.2.3.1 Economic Base

The economy of the RSA is centered on resource extraction industries. Key economic activities include oil sands development, forestry, tourism, agriculture and oil and gas exploration and extraction.

The Forest Management Agreement (FMA) for lands within the RSA is held by Alberta-Pacific Forest Industries (Al-Pac). The FMA is a tenure contract between the Government of Alberta and Al-Pac for sustainable management and harvest of deciduous and coniferous trees. Al-Pac is a private company with estimated annual revenue of about \$100 million and approximately 500 employees, most based locally in or near the RSA.

There are 23 in situ oil sands projects in various stages of development within the RSA ([Table 3](#)). Many more leases are held by various companies with additional projects in various stages of feasibility assessment. The first in-situ operation in the RSA was Cenovus Christina Lake Project in 2000. Annual production in 2010 was 18,000 barrels per day, anticipated to increase to close to 100,000 barrels per day by 2013 (Cenovus 2011). The area projects have resulted in increases in permanent and shadow populations in the RSA through construction workforces and direct, indirect and induced employment during operations. Additional employment in the area comes from the development of linear facilities in support of oil sands operations. Companies have a variety of strategies for transportation and housing of both temporary and permanent employees to reduce potential population effects on housing, services and traffic.

Table 3 In situ Oil Sands Developments in the Regional Study Area

Company	Project	Phase
Alberta Oil Sands	Clearwater West Pilot	Regulatory Process
Athabasca Oil Sands Corp.	Hangingstone	Regulatory Process
Canadian Natural Resources Limited	Kirby In situ Oil Sands Project (Kirby South 2010)	Under Construction
Canadian Natural Resources Limited	Kirby Expansion Project	Regulatory Process
Canadian Natural Resources Limited	Kirby North 2010 (formerly Enerplus Kirby Oil Sands Project Phase 1)	Site Preparation
Canadian Natural Resources Limited	Grouse	Regulatory Process
Cenovus FCCL Ltd.	Christina Lake Phase A, B, C	Operating
Cenovus FCCL Ltd.	Christina Lake Phase D	Under Construction
Cenovus FCCL Ltd.	Christina Lake Phase E, F G	Approved
Cenovus FCCL Ltd.	Narrows Lake	Regulatory Process
Connacher Oil and Gas Limited	Great Divide – Pod One	Operating
Connacher Oil and Gas Limited	Great Divide – Algar	Operating
Connacher Oil and Gas Limited	Great Divide – Expansion	Regulatory Process
ConocoPhillips Canada Resources Corporation	Surmont – Phase 1	Operating
ConocoPhillips Canada Resources Corporation	Surmont – Phase 2	Approved
Devon Energy Corporation	Jackfish 1	Operating
Devon Energy Corporation	Jackfish 2	Operating
Devon Energy Corporation	Jackfish 3	Regulatory Process
E-T Energy	Poplar Creek	Regulatory Process
Grizzly Oil Sands	Algar Phase 1	Regulatory Process
Grizzly Oil Sands	Algar Phase 2	Regulatory Process
Harvest Operations Corp.	BlackGold	Under Construction
Harvest Operations Corp.	BlackGold Expansion	Regulatory Process
Ivanhoe Energy Inc.	Tamarack	Regulatory Process
Japan Canada Oil Sands Ltd.	Hangingstone – Pilot	Operating
Japan Canada Oil Sands Ltd.	Hangingstone – Expansion	Regulatory Process
MacKay Operating Corp.	MacKay River Pilot	Approved
MacKay Operating Corp.	MacKay River Commercial	Approved
MEG Energy Corp.	Christina Lake Pilot and Phase 2A	Operating
MEG Energy Corp.	Christina Lake Phase 2B	Under Construction
MEG Energy Corp.	Christina Lake Phase 3	Regulatory Process
Nexen Inc.	Long Lake – Phase 1	Operating
Nexen Inc.	Long Lake – Phase 2	Approved
Nexen Inc.	Long Lake South	Approved
Petrobank Energy and Resources Ltd.	May River	Regulatory Process
Statoil Canada Ltd.	Kai Kos Dehseh – Leismer Demonstration	Operating
Statoil Canada Ltd.	Kai Kos Dehseh – Leismer Commercial	Approved
Statoil Canada Ltd.	Kai Kos Dehseh – Hangingstone	Approved
Statoil Canada Ltd.	Kai Kos Dehseh – Corner	Approved
Statoil Canada Ltd.	Kai Kos Dehseh – Thornbury	Approved
Suncor Energy	Meadow Creek	Approved
Whitesands In situ Partnership (Petrobank)	Whitesands/May River	Operating

The conventional natural gas industry has been developed throughout the area. Recently, the Energy Resources Conservation Board (ERCB) has emphasized the development of bitumen resources in the RSA and conventional gas projects have been curtailed as a result.

Tourism is an important industry in the southern part of the RSA. Lac La Biche has several beaches and the Sir Winston Churchill Provincial Park as well as the Lakeland Provincial Park and Recreation Area east of Lac La Biche. The area attracts more than 175,000 tourists annually, in all seasons. Tourism is a growing industry in Fort McMurray, fuelled by curiosity to see the oil sands developments and to experience various outdoor recreation activities in the boreal forest.

There is agricultural production located in the south end of the RSA, south of Lac La Biche, but is limited by climate and land tenure. Crops include hay. There is also grazing for cattle.

1.2.3.2 Municipal Tax Base

The distribution of residential and non-residential tax base varies between the two municipalities of the RSA (Table 4).

Table 4 2011 Equalized Tax Assessment

2008	RMWB	Lac La Biche County
Residential	\$11,543,044,268	\$970,456,986
Farmland	\$0	\$22,210,120
Non-residential	\$4,393,134,137	\$265,432,487
Non-residential linear	\$2,282,045,720	\$1,405,141,980
Non-residential railway	\$0	\$1,762,500
Machinery and Equipment	\$16,897,027,043	\$783,617,990
Total	\$35,115,251,168	\$3,448,622,063

Source: Alberta Municipal Affairs 2011, internet site.

There have been recent discussions and an agreement between the Government of Alberta, the City of Cold Lake, Lac La Biche County, the Municipal District (M.D.) of Bonnyville and the RMWB about realigning the municipal boundaries. The Town of Bonnyville has not been included in the negotiations. The re-alignment will provide the City of Cold Lake with access to a larger industrial tax base while compensating the other municipalities for any change to the tax base. The elements of the agreement reported in the Lac La Biche Post (Ho 2011) include:

- The City of Cold Lake will receive tax revenue from the Cold Lake Air Weapons Range (AWR).

- Lac La Biche County will receive some tax revenue from the AWR on a declining basis over five years. The municipal boundary will be adjusted north of the AWR to provide Lac La Biche County with land currently in the RMWB.

Of the other municipalities involved, the reaction to the boundary change includes:

- The MD of Bonnyville wants to ensure that it is compensated for maintaining access into the Cold Lake Air Weapons Range (Bonnyville Nouvelle 2011, Internet site).
- The RMWB has announced that it does not support any municipal boundary change (Fort McMurray Today 2011a).
- The Town of Bonnyville is concerned that it has been left out of the process and may face similar fiscal challenges, as the City of Cold Lake in the future if they are excluded from negotiations (Bonnyville Nouvelle 2011, Internet site).

1.2.3.3 Labour Force

The most recent source of data for labour force in sub-provincial areas is Statistics Canada's 2006 census. Statistics for the RSA are available for the RMWB as a whole, and the reserve communities of the CPDFN at Janvier, FMFN at Gregoire Lake, and Beaver Lake First Nation. Statistics for other small communities, such as Heart Lake First Nation #167 Reserve are not reported separately by Statistics Canada to protect the privacy of residents. Due to the amalgamation of the Town of Lac La Biche and Lakeland County in 2007, the statistics from the 2006 census do not represent the current Lac La Biche County. Instead, data are provided for the former Town of Lac La Biche and Lakeland County.

The labour force in the RSA is distributed across a number of industries with agriculture and other resource-based industries and other services being the industries employing the highest percentage of the labour force (Table 5). Other industries that are larger employers in the RSA include construction, health services, business services, retail and education services.

Table 5 Labour Force by Industry (2006)

Industry	RMWB		FMFN # 176 and 176A Reserves at Gregoire Lake		CPDFN #194 Reserve at Janvier		Town of Lac La Biche		Lakeland County		Beaver Lake # 131 Reserve		Province of Alberta	
	Number of People	% of Total	Number of People	% of Total	Number of People	% of Total	Number of People	% of Total	Number of People	% of Total	Number of People	% of Total	Number of People	% of Total
Agriculture and other resource-based industries	10,585	31	0	0	10	20	125	9	800	23	15	14	228,520	12
Construction	3,950	12	10	14	0	0	175	12	390	11	10	9	169,420	9
Manufacturing	865	3	0	0	0	0	35	2	135	4	0	0	138,365	7
Wholesale trade	1,135	3	0	0	0	0	15	1	30	1	0	0	85,515	4
Retail trade	3,135	9	0	0	0	0	205	14	320	9	0	0	206,655	11
Finance and real estate	1,280	4	0	0	0	0	45	3	80	2	0	0	97,465	5
Health care and social services	1,695	5	0	0	10	20	90	6	305	9	15	14	175,200	9
Educational services	1,645	5	0	0	0	0	170	12	335	10	10	9	120,460	6
Business services	4,465	13	25	36	10	20	165	12	480	14	10	9	354,265	18
Other services	4,860	14	25	36	10	20	385	27	565	16	40	36	352,760	18
Total	33,615	99	70	86	50	80	1,420	98	3,430	99	110	91	1,928,635	99

Note: Totals may not add up to 100% due to rounding or actual statistics reported.

Source: Statistics Canada 2006a, 2006b.

Table 6 Percent of Labour Force by Occupation (2006)

	RMWB		FMFN # 176 and 176A Reserves at Gregoire Lake		CPDFN #194 Reserve at Janvier		Town of Lac La Biche		Lakeland County		Beaver Lake # 131 Reserve		Province of Alberta	
	Number of People	% of Total	Number of People	% of Total	Number of People	% of Total	Number of People	% of Total	Number of People	% of Total	Number of People	% of Total	Number of People	% of Total
Management occupations	2,400	7	0	0	0	0	135	10	305	9	10	9	187,240	10
Business, finance and administration occupations	4,465	13	20	29	10	20	185	13	550	16	10	9	340,430	18
Natural and applied sciences and related occupations	2,930	9	0	0	0	0	95	7	110	3	0	0	144,240	7
Health occupations	1,100	3	0	0	0	0	85	6	115	3	0	0	103,620	5
Occupations in social science, education, government service and religion	1,430	4	0	0	10	20	195	14	275	8	10	9	136,610	7
Occupations in art, culture, recreation and sport	380	1	0	0	0	0	15	1	20	1	0	0	45,160	2
Sales and service occupations	7,595	23	20	29	10	20	330	23	525	15	25	24	438,105	23
Trades, transport and equipment operators and related occupations	11,035	33	35	50	20	40	295	21	965	28	20	19	350,360	18
Occupations unique to primary industry	1,200	4	20	29	10	20	75	5	435	13	15	14	117,500	6
Occupations unique to processing, manufacturing and utilities	1,075	3	0	0	0	0	10	1	125	4	10	9	65,365	3
Total	33,615	100	70	108	50	120	1,420	101	3,430	100	110	93	1,928,635	99

Note: Totals may not add up to 100% due to rounding or actual statistics reported.

Source: Statistics Canada 2006a, 2006b.

The occupational distributions of the RSA vary in the communities and in some cases are different than the provincial averages ([Table 6](#)). The high rate of trades, transport and equipment operators and related occupations in the RSA highlights the importance of the oil sands, forestry, and oil and gas sectors in the area. Sales and service occupations and business and finance occupations are also important occupations in the RSA.

The oil sands and oil and gas sector has been a key employer of workers and businesses in the First Nations communities for several years. In 2010, over 1,700 Aboriginal people were employed by the oil sands industry in permanent operations jobs in the RMWB (OSDG 2011). This number represents approximately 30% of the total Aboriginal identity population recorded in the 2006 Aboriginal Population Profile for the RMWB (Statistics Canada 2006b, Internet Site) and has been continually increasing over the past decade (OSDG 2011).

1.2.3.4 Educational Attainment

The educational attainment levels of the population in the RSA aged 15 and over are shown in [Table 7](#). In 2006, the level of educational attainment in the RSA was lower on average than in Alberta with the exception of the RMWB. Since 2006, the number of people with apprenticeship, trades certificates or diplomas may have increased because of the high demand in the RSA for tradespersons. There are also multiple programs to accelerate trades being delivered in high schools and opportunities for trades and technology courses supported by industry in local colleges (Keyano College 2011, internet site; Portage College, internet site; Shannon 2011).

Table 7 Educational Attainment in the RSA (2006)

Community	Total Population Age 15 and over	No. with certificate, diploma, degree		High school certification or equivalent		Apprenticeship or trades certificate or diploma		College or other non-university certificate or diploma		University certificate, diploma or degree	
		#	% of total	#	% of total	#	% of total	#	% of total	#	% of total
RMWB	41,055	8211	20%	10264	25%	7390	18%	8622	21%	6979	17%
CPDFN at Janvier IR 194	195	160	82%	25	13%	0	0%	0	0%	10	5%
FMFN at Gregoire Lake IR 176	60	35	58%	10	17%	0	0%	0	0%	10	17%
FMFN at Gregoire Lake IR 176A	80	50	63%	15	19%	10	13%	0	0%	0	0%
Lac La Biche Town (now part of Lac La Biche County)	2,025	668	33%	425	21%	182	9%	304	15%	425	21%
Lakeland County (now Lac La Biche County)	4,825	1,834	38%	1,013	21%	724	15%	772	16%	483	10%
Heart Lake IR 167	50	45	90%	0	0%	10	20%	0	0%	0	0%
Beaver Lake IR 131	245	191	78%	10	4%	10	4%	20	8%	0	0%
Province of Alberta	2,625,145	603,783	23%	682,538	26%	288,766	11%	472,526	18%	577,532	22%

Source: Statistics Canada 2006 a, 2006b.

1.2.3.5 Earnings and Income

Available data for earnings and income in the RSA are shown in [Table 8](#). Median earnings in 2006 for the RMWB are well above the rest of the RSA and the province. In 2011, the average household income in Fort McMurray is \$177,000 which is the highest in the country (Globe and Mail, 2011). Median income in what is now Lac La Biche County (former Town of Lac La Biche and Lakeland County) is generally lower than the median in the RMWB and the province.

Table 8 Earnings and Income (2006)

Persons Aged 15 and Over with Income	RSA					Province of Alberta
	RMWB	CPDFN #194 Reserve at Janvier	Town of Lac La Biche	Lakeland County	Beaver Lake # 131 Reserve	
Median earnings	\$47,860	\$19,520	\$24,753	\$26,110	\$12,096	\$29,738
Median income	\$43,920	\$12,960	\$22,197	\$25,515	\$11,904	\$28,896
Median full-time earnings	\$74,925	\$56,320	\$39,870	\$41,099	\$24,043	\$43,964

Source: Statistics Canada 2006a, 2006b.

1.2.3.6 Participation and Unemployment

As shown in [Table 9](#), the workforce participation rate in 2006 in the RMWB (82.3%) was above the provincial average. Participation rates in the remainder of the RSA are below the provincial average. The participation rate in the CPDFN #194 Reserve, FMFN #176 and #176A Reserve, and Beaver Lake Cree Nation #131 Reserve are below the provincial average and the rest of the RSA, which may reflect the greater incidence of non wage activities, such as hunting, trapping and plant-gathering.

The unemployment rates in the RMWB were similar to the provincial statistics for 2006. Unemployment rates at Beaver Lake Cree Nation #131 Reserve, FMFN #176 and #176A Reserve and CPDFN #194 Reserve were higher than the rest of the RSA and the province. In June 2011, unemployment in the Wood Buffalo/Cold Lake region, which encompasses the RSA, was 5.4% which is up from 4.6% in June 2010, and 3.7% in July 2008 (Alberta Employment and Immigration 2011, 2008). The provincial unemployment rate for June 2011 was 5.6% (Alberta Employment and Immigration 2011). Seasonal employment may also influence unemployment rates, depending on when unemployment rates are measured.

Table 9 Participation and Unemployment (2006)

Persons Aged 15 and Over with Income	RSA							Province of Alberta
	RMWB	CPDFN #194 Reserve at Janvier	FMFN # 176 Reserve at Gregoire Lake	FMFN # 176A Reserve at Gregoire Lake	Town of Lac La Biche	Lakeland County	Beaver Lake # 131 Reserve	
Total persons 15 and over	41,055	190	60	80	2,025	4,830	245	2,625,140
Participation rate ^(a)	82.3%	31.6%	41.7%	56.2%	70.6%	71.2%	49.0%	74.0%
Employment rate ^(b)	79.0%	23.7%	41.7%	50.0%	67.7%	67.8%	34.7%	70.9%
Unemployment rate ^(c)	4.0%	16.7%	40.0%	22.2%	4.2%	4.8%	29.2%	4.3%

^(a) Defined as “Refers to the labour force in the week (Sunday to Saturday) prior to Census Day (May 16, 2006), expressed as a percentage of the population 15 years and over excluding institutional residents” (Statistics Canada 2006a).

^(b) Defined as “Refers to the number of persons employed in the week (Sunday to Saturday) prior to Census Day (May 16, 2006), expressed as a percentage of the total population 15 years and over excluding institutional residents” (Statistics Canada 2006a).

^(c) Defined as “Refers to the unemployed expressed as a percentage of the labour force in the week (Sunday to Saturday) prior to Census Day (May 16, 2006)” (Statistics Canada 2006a).

Source: Statistics Canada 2006a, 2006b.

1.3 GOVERNMENTS IN THE REGIONAL STUDY AREA

1.3.1 Government of Alberta

The Government of Alberta began planning for oil sands development in 1974 when it set up the Alberta Oil Sands Technology and Research Authority to “develop oil sands technologies that would allow bitumen to be recovered at relatively low costs” (Government of Alberta 2008). In 2006, the Government of Alberta’s focus on the oil sands changed when the government directed the Oil Sands Ministerial Strategy Committee to “develop a coordinated short-term action plan to address the social, environmental and economic impacts of oil sands developments” (Government of Alberta 2009).

In December 2006, the Oil Sands Ministerial Strategy Committee released *Investing in our Future: Responding to the Rapid Growth of Oil Sands Development — Final Report* (also known as the Radke Report; Radke et al. 2006). Both general and specific recommendations for the Athabasca oil sands area were detailed in the report. Many of the recommendations focused on integration of provincial planning and action, as well as the planning functions of the RMWB. In July 2007, the Government of Alberta released two additional reports: *Oil Sands Consultations: Aboriginal Consultation Final Report* (Government of Alberta 2007) and the *Oil Sands Consultations: Multi-Stakeholder Committee Final Report* and the (Government of Alberta 2007b). These reports summarized the Government’s public consultation in regards to the development of Alberta’s oil sands.

Following the Radke (2006) report and the two oil sands consultation reports, the provincial government identified the need for responsive medium and long term planning related to oil sands developments, through its strategy documents: *Responsible Actions, A Plan for Alberta’s Oil Sands, and the Land Use Framework* (Government of Alberta 2009).

Socio-economic goals identified in the Responsible Actions document include:

- Support further planning and development of healthy communities in the oil sands regions.
- Improve public safety and security in the oil sands regions.
- Enhance timely investment in physical infrastructure in the oil sands regions.
- Ensure that Albertans continue to receive appropriate economic benefit from extraction of oil sands.

- Optimize the economic benefit of the bitumen resource for Alberta through upgrading and value-added petrochemical development.
- Diversify Alberta's oil sands-related products and services into other international markets.
- Maximize industrial infrastructure and address workforce needs to support economic development of the oil sands.
- Promote clarity and consistency in consultation processes with First Nations.
- Enhance collaborative government-to-government relationships.
- Continue to work with the Métis Settlements in the oil sands regions on matters affecting Settlement lands. Develop transparent and effective performance measurement systems that foster continuous improvement to achieve outcomes.
- Create effective data-management systems to facilitate consistent and uniform planning in the oil sands regions" (Government of Alberta 2009).

Each of these goals involve several actions. Some of the structures related to managing social and economic effects will be established through the Land Use Framework (See Resource Use, Volume 6, Section 3.6) and Comprehensive Regional Infrastructure Sustainability Plans (CRISP).

Comprehensive Regional Infrastructure Sustainability Plans are long-term planning documents based on predicted growth in the population and oil sands production levels and stakeholder engagement. "Each plan will establish a long-term blueprint for future infrastructure development based on possible future oil sands production rates and associated population growth, and will enhance the way provincial and municipal governments work and plan together" (Government of Alberta 2011a, internet site). While the Government of Alberta will coordinate the implementation of the CRISPs, municipal governments and industry will need to ensure plans such as industry roads and municipal development plans to align with the application CRISP since the CRISPs do not identify funding sources to develop the infrastructure.

In May 2011, the first CRISP was released for the Athabasca Oil Sands Area (AOSA). During the development of the CRISP, input was received from key government ministries, impacted municipalities, the public, First Nations, Métis, industry organizations and municipal councils (Government of Alberta, 2011b). The AOSA CRISP includes the communities of the RMWB, the Hamlet of Lac La Biche, the Town of Wabasca and several of the smaller communities in Lac La Biche County and the MD of Opportunity.

The AOSA CRISP is a 35 year plan based on reaching bitumen production of 6.0 million barrels per day and an estimated population of 240,500 by 2045. To accommodate this growth the AOSA CRISP provides details on many infrastructure improvements. Highlights of these improvements include:

- A new community of just over 40,000 people north of Fort McKay.
- A multi-modal transportation network to connect the communities in the AOSA, including a ring road around Fort McMurray and connection between Red Earth Creek, Wabasca and Fort McMurray.
- A rapid transit system between communities and project sites.
- New construction of and upgrades to water and wastewater facilities.
- New schools and health care facilities.
- Two planned workcamp communities:
 - A community south of Conklin that can accommodate up to 5,000 people and would be built in phase one of the CRISP by 2014.
 - A community north of the Hamlet of Wabasca that can accommodate up to 6,000 people and would be built during phase two of the CRISP between 2015 and 2025 Government of Alberta 2011b).

Several other Government of Alberta departments have roles in the delivery and planning of services in the RSA including, but not limited to:

- Alberta Sustainable Resource Development (ASRD) – responsible for the administration of the Green Zone areas and the *Land Use Framework*.
- Alberta Transportation – responsible for the provincial transportation system and water management infrastructure.
- Alberta Health and Wellness – responsible for the delivery of Alberta's health services.
- Alberta Environment and Water (AEW) – responsible for the protection and enhancement of Alberta's natural environment.
- Alberta Energy – responsible for the development of energy and mineral resources.

1.3.2 First Nations Communities

First Nations reserves and on-reserve communities within the RSA do not fall under local municipal jurisdiction. Each First Nations community exercises local control over their reserve lands and is governed by an elected chief and council. The First Nations communities may rely on federally delivered services on the reserves or use services in the Hamlet of Lac La Biche, Fort McMurray and other communities in the RMWB. The First Nations do not rely on administrative services from the municipalities, but may discuss collaborating on emergency services and regional services such as landfills.

The First Nations within the RSA have developed policies designed to work with all levels of industry. The Athabasca Tribal Council (ATC) represents the interests of five First Nations whose reserves lie within the RMWB: The Athabasca Chipewyan First Nation, Chipewyan Prairie Dene First Nation, Fort McKay First Nation, Fort McMurray No. 468 First Nation, and Mikisew Cree First Nation. Initially the five First Nations located within the RMWB agreed through the ATC to the All Parties Core Agreement through the Athabasca Tribal Council to develop Industry Relations Corporations (IRCs) that represented the Chief and Councils and members of the Nations. The IRCs are directed by their each Nation Chief and Councils and have been designed to “Build Bridges” to communicate the industry projects to their respective communities. Currently, The ATC Core agreement is defunct as the agreement has expired and a new agreement has not been signed.

The First Nations reserves located within Lac La Biche County are all Treaty Six members, and not part of the ATC. Each First Nation is developing industry relationships on their own.

The IRCs and other consultation management frameworks for each First Nation have evolved separately because policies differed for each project that may impact individual reserves and traditional territories. Through their respective government representatives, each community has developed a Consultation Policy guideline document that can be found in the public domain or can be requested from the First Nations. Policy guidelines insist that all proponents review and consult with the Nations to achieve effective communication strategies that will work for all parties involved that address environment, social, Treaty and Métis rights.

Protocol differs in each community according to the traditions, customs and often language of the community. Each community shares a commonality in hunting and gathering, but each is influenced by geographical differences. The Aboriginal communities in the RSA include Dene, Cree and Métis.

1.3.3 Regional Municipality of Wood Buffalo

In 1995, the City of Fort McMurray and the surrounding Improvement District 18 amalgamated to become the RMWB. The RMWB provides local municipal governance and planning and administrative functions for the region including Fort McMurray and the rural communities within the municipal boundaries including the Hamlets of Anzac, Gregoire Lake Estates, Janvier, Conklin, Fort Chipewyan and Saprae Creek Estates and the communities of Draper and Fort Fitzgerald. The municipal government centre, including mayor and council, is located in Fort McMurray.

In both the rural and urban communities, the RMWB has experienced rapid population increases in the past 10 years with an average annual growth rate of 7.4% (RMWB 2010a). In addition, the RMWB has also seen a rapidly expanding shadow population which was over 23,000 people in 2010. In response to the demands on services and infrastructure in all communities in their jurisdiction, and to support the development of a new Municipal Development Plan (MDP), the RMWB completed numerous planning and visioning initiatives in the past five years, including:

- A rural service delivery review which delivers guidance in providing equitable service to rural residents in the RMWB. The RMWB has adopted guiding principles for decisions on what should be undertaken when delivering municipal service to rural areas. The review also provided level of service standards in delivering services to the communities in the Rural Service Area (RMWB 2010b).
- Envision Wood Buffalo, an integrated community sustainability plan which provides a long-term strategic plan for municipalities. Developed by engaging with members of Fort McMurray and the rural communities, it identifies goals for sustainability and provides direction for communities as they move into the future (RMWB 2010c).
- A commercial and industrial land use study to provide policy direction for business and industrial land and commercial space development in the RMWB to support balanced community growth (RMWB 2010d).

The RMWB is responsible for planning and infrastructure in both the urban and rural service areas, delivered through the MDP, area structure plans (ASP) and bylaws. The MDP provides a framework for land use, social, environmental, cultural and economic aspects of the region and is used by the RMWB to guide future decision-making. The RMWB published a MDP in 2011 with a vision for 20 years of urban and rural planning (RMWB 2011a). Highlights of the MDP as it affects the communities of the RSA include:

- Projected bitumen capacity in the next 20 years (operating, under construction, approved, in application, and announced) of 7.5 million barrels per day.
- A workforce of about 10,000 operations employees associated with projects south of Fort McMurray, of which about 5,700 are associated with projects within 50 km of Conklin.
- Peak operational employment growth between 2012 and 2019.
- Community growth focusing on Fort McMurray and Anzac. The MDP identifies growth to a population of 6,000 to 8,000 residents in Anzac, and increasing multi-family residential options and services in Anzac.
- Confirming the single family residential development pattern for both Conklin and Janvier, offering limited increase in residential development areas in both communities. Commercial development along Highway 881 will be encouraged at Conklin.

The MDP also identifies six goals to guide sustainable development, which include:

- **Responsible development:** ensuring sufficient land for urban and rural development and planning for investment in municipal infrastructure.
- **Environmental stewardship:** focusing on healthy ecosystems, access to clean air and water, and waste management.
- **Economic resilience:** ensuring a diversified economy with a focus on integrated regional economic development and skills and knowledge development.
- **Home and belonging:** ensuring livable, safe communities with broad and attainable housing choices.
- **Vibrant culture:** celebrating the heritage and culture of the region, arts and culture and the outdoors.
- **Working together:** valuing citizens, governance and effective partnerships.

The MDP does not identify timelines for specific community investments.

The land surrounding Fort McMurray and the rural communities is held by the Government of Alberta and release of land occurs through negotiation between the RMWB and the Government of Alberta. In August 2011, a memorandum of understanding (MOU) was signed by the Government of Alberta and the RMWB that will lead to the creation of an Urban Development Sub-Region (USDR). This will give the RMWB jurisdiction over land to undertake residential, commercial and industrial development for up to 200,000 residents (RMWB 2011b). The USDR is anticipated to help stabilize the housing market and reduce the difference in housing costs in the RMWB and the rest of the province (RMWB 2011b).

1.3.3.1 Housing

Demand and prices for housing throughout the RMWB are high primarily due to the level of population growth over the past decade and limited supply. The housing market is constrained by a number of factors that contribute to high prices and limited availability.

Much of the developable land surrounding Fort McMurray and the other communities in the RWMB is Crown land owned by the Government of Alberta. The release of this land occurs through negotiation with the RMWB and the Government of Alberta. This situation reduces the RMWB's control and influence over development of these lands and can affect the availability and cost of housing (RMWB 2010d).

Aside from Crown ownership of land there are many other challenges involved in creating residential neighbourhoods in the RMWB. The ability to move undeveloped Crown land to the housing construction stage depends on a number of factors including landowner intentions, timeliness of onsite and offsite servicing, the RMWB's ability to fund and complete infrastructure projects, and the capacity of the local construction workforce (RMWB 2010d). The RMWB notes that even if these other challenges are met, "the land released and planned to be released by the Government of Alberta will not be sufficient to meet the future demand" (RMWB 2010d). Proactive planning between the RMWB and the Government of Alberta is on-going, however, it is likely that industry will continue to require workforce camps and transportation of remote workers.

The Core Need Income Threshold (CNIT), provided by Alberta Housing and Urban Affairs, sets the minimum income that people in each community need to earn and to afford housing (Alberta Housing and Urban Affairs 2011; [Table 10](#)). Higher incomes are needed to afford homes in the RMWB than in Lac La Biche County. For all communities, the incomes needed in the CNIT are well above the median income in the RSA with the exception of bachelor apartments ([Table 10](#)).

Table 10 Core Need Income Threshold for the RSA (2011)

	Bachelor	1 Bedroom	2 Bedroom	3 Bedroom	4 Bedroom	5 Bedroom
RMWB	\$25,000	\$74,500	\$87,000	\$106,000	\$109,000	\$112,000
Anzac	\$58,500	\$74,500	\$87,000	\$106,000	\$109,000	\$112,000
Janvier	n/a	\$68,000	\$72,000	\$77,500	\$81,000	\$84,000
Conklin	n/a	\$68,000	\$72,000	\$77,500	\$81,000	\$84,000
Lac La Biche	\$27,500	\$33,500	\$39,500	\$44,500	\$48,000	\$51,000

Source: Alberta Housing and Urban Affairs 2011.

n/a – not available.

Similar to previous years, in spring 2011 the RMWB had the highest average rent among all urban centres in Alberta at \$2,020 per month (CMHC 2011). As heightened oil prices have strengthened economic and labour market conditions, the rental demand in the RMWB is beginning to increase and the vacancy rate is decreasing. The RMWB's vacancy rate declined from 13.2% in April 2010 to 6.2% in April 2011 (CMHC 2011).

Affordable housing is in demand throughout the RMWB. The Wood Buffalo Housing and Development Corporation (WBHADC) is a non-profit company created by the RMWB in 2001 with a mandate to create and manage affordable housing units. The WBHADC has created several programs, both for rental and ownership. Eligibility for WBHADC housing is based on the affordable housing criteria of the *Alberta Social Housing Act*, and higher needs applicants, such as families and singles with children, and seniors, are prioritized. WBHADC currently maintains 1,108 rental units throughout RMWB of which 987 are within the family housing portfolio (WBHADC 2011, internet site). The affordable rental housing units have fixed rates that are maintained regardless of the size of household income and are kept below rents charged in community based on costs to build and maintain the rental units (WBHADC 2011, internet site). WBHADC also provides subsidized housing where rental rates are based solely on income. In addition to operating rental units, WBHADC administers a number of Rent Supplement Programs on behalf of the Government of Alberta and provides an Affordable Homeownership Program where qualifying families receive specialized affordable mortgages on newly constructed family homes that aren't for sale on the regular real estate market (Robertson 2011, pers. comm.; WBDHC 2011, internet site).

1.3.3.2 Education

Primary and Secondary Education

Alberta Education oversees prioritization, planning and approval for projects, whereas Alberta Infrastructure is responsible for physical infrastructure of

schools (Alberta Infrastructure 2011, internet site). Education in the RMWB is provided through the Northland School Division, the Fort McMurray Public School Division (FMPSD) and the Fort McMurray Catholic School Division (FMCSD).

Issues and trends for all elementary and secondary school boards in the RMWB include:

- Competition in the labour market has resulted in higher wages within the school system when compared to other Alberta centres. Operational costs are higher than other school districts, and per pupil costs are higher. Government funding is also higher than in other districts (Kallal 2009, pers. comm.).
- Transition is difficult for rural Aboriginal students entering the Fort McMurray public and Catholic systems, for students living away from home and for students having to travel to other communities by bus.
- High school completion rates have been declining as students are attracted to relatively high paying industry related jobs rather than completing high school or entering post-secondary programs. Some students complete high school over more years than previously, in order to work while attending school. School attendance is low in many rural communities throughout the RMWB.
- An imbalance of student enrolment numbers in Fort McMurray means that many schools in newer residential areas are at capacity while schools in other neighbourhoods have spaces available.
- School enrolment is trailing the population increase, making it difficult to anticipate needs in coming years.

Post-Secondary

Post-secondary education in the RMWB is provided primarily by Keyano College, a public-board governed college. In the 2009 to 2010 school year, the college served nearly 3,000 credit students, or approximately 1,350 full-load equivalent students (FLE; Keyano College 2010). Keyano College serves Fort McMurray as well as the rural communities with four learning centres located in Fort MacKay, FMFN Reserve at Gregoire Lake, Conklin and Janvier. Community outreach programs are provided to help adult learners achieve upgrading of basic academic courses and high school equivalency diplomas.

The focus of the college has been vocational training in trades and heavy industry. The college works closely with oil sands companies to ensure programs are geared to job opportunities in the region. Programming has expanded to include many other occupational areas important in the community including Aboriginal child and family services, emergency medical training, nursing and

music. University transfer programs are also offered, such as a four-year Bachelor of Education degree.

Keyano College is a partner with industry, contractors and provincial organizations in delivering innovative apprenticeship programs. Recent program initiatives include the environmental monitor program, in partnership with industry.

Keyano College faces the same pressures as other school boards and service providers in the area:

- The cost of living and competition from industry have created a challenge for recruitment and retention of staff and adequate funding for wages.
- Housing for students is limited and expensive.
- Program delivery in the rural communities is also a challenge for staff recruitment and course maintenance.
- Planning is challenging as enrolment fluctuates.

As well, the prevalence of construction jobs for unskilled labourers is a draw for prospective students who might otherwise have chosen a program of further education at Keyano College. Oil sands developers in the region encourage at least a grade 12 education, and vocational training for any trade or heavy equipment occupation. However, contractors may not have the same standards, and students may choose a job with a contractor rather than further education.

1.3.3.3 Medical Facilities and Services

The provision of health care services for the RMWB is the responsibility of Alberta Health Services (AHS). For the urban and rural residents of the RMWB, the centre of acute health care provision is the Northern Lights Health Centre (NLHC) in Fort McMurray. The NLHC provides many services including:

- General surgery;
- Orthopedics;
- Obstetrics;
- Intensive care unit;
- Critical care unit; and
- Emergency.

Emergency room wait times are the best in Alberta as a result of continuous improvements initiatives within the NLHC and the high number of relatively minor cases (Bradley 2011, pers. comm.). The NLHC is currently upgrading their emergency room with an expected completion in 2013 or 2014. The NLHC has 60 doctors and 105 beds and is typically at 75% to 100% occupancy (Bradley 2011, pers. comm.). The construction of a new 100 bed long term health care facility, expected to be completed in 2015, will create additional space for acute care within the NLHC (Bradley 2011, pers. comm.). The provincial government has provided funding for a Community Health and Wellness/Urgent Care clinic in Fort McMurray

The NLHC, in concert with other health and wellness providers in the RMWB, is undertaking planning related to meeting the primary and secondary care needs for increasing population in the region, which includes health and wellness initiatives (e.g., women's health initiative), long term care services and facilities, primary care clinics, and upgrades to the NLHC (Bradley A. 2011, pers. comm.). The planning initiatives directly reflect the anticipated growth in population related to oil sands projects, and the Oil Sands Developers Group Health Committee is one regular communication avenue between developers and health and wellness providers. CRISP has proposed 65 new health care services spaces in the AOSA by 2014. The RMWB is still challenged by a shortage of doctors, especially general practitioners, and retention of staff. The NLHC has 32 housing units available on short term basis for staff, five of which are available as affordable housing. Twenty-seven units are identified to help with recruitment.

Concerns in health care for the NLHC include:

- shortage of doctors, including specialists;
- lack of capacity for neonatal care; and
- difficulty attracting and retaining qualified medical, administrative and support personnel, given the cost of housing in the region (Bradley 2011, pers. comm.).

1.3.3.4 Emergency and Protective Services

Policing

Policing is provided to the RMWB by the Royal Canadian Mounted Police (RCMP) Wood Buffalo detachment. The Wood Buffalo Detachment is the largest in Alberta with over 180 members (RMWB 2011c, internet site). The rural unit is responsible for policing the areas of Fort McMurray, Gregoire Lake Estates, Fort McMurray First Nation at Willow Lake, Anzac, Janvier and Conklin.

The municipal, provincial and federal governments share funding for police services. The RCMP members and support staff face the same cost of living considerations as other non-oil sands workers in the RMWB.

Crime rates in the RMWB declined in 2009. Year-to-date crime statistics for the RMWB show a decline from 2008 and 2009 in overall crime rate with an 18% decline in the urban areas and an 11% decrease in the rural areas (RMWB 2011d, internet site). Fourth quarter results show that between October and December 2009, crime was down 19% in the rural areas of the RMWB. The RCMP attribute these decreases to the ongoing work of general duty members and newer crime prevention initiatives including bait vehicles and the introduction of a Crime Reduction Team (RMWB 2011e, internet site).

Ambulance and Fire Services

The Fort McMurray Fire Department provides firefighting and ambulance services to both the rural and urban communities in the RMWB. The urban Fire Department is a professional service that also supports the volunteer forces in the rural community. Community fire protection costs are the responsibility of the RMWB.

Emergency Medical Services (EMS) are provided in Fort McMurray and also provide services to the rural communities. Calls from the rural communities are approximately half of the volume of calls from the urban community, which is a high rate considering the low population in the rural communities.

Forest fire protection and suppression is provided by the Forest Service Division of ASRD. Mutual aid may be requested or provided between the various firefighting departments, including provincial firefighting services, when fires cross jurisdictional boundaries. Each oil sands facility also has firefighting equipment on site.

Emergency Response and Disaster Planning

In Alberta, initial response to a disaster or emergency situation is the responsibility of the municipality involved, as set out in provincial legislation. Therefore, the RMWB is responsible for disaster prevention and emergency response planning within the municipality, and has a Municipal Emergency Plan. Concerns of the municipality include adequate planning of transportation safety on high use major transportation corridors, because there are only two highways into the RSA from the south. Alberta Emergency Management Agency “leads the coordination, collaboration and co-operation of all organizations involved in the prevention, preparedness and response to disasters and emergencies” (Alberta Emergency Management Agency 2011, website). Each oil sands facility

also has an emergency response plan that requires coordination with broader regional emergency services organizations. The federal government also has some emergency response duties, primarily related to terrorism and nuclear facilities.

1.3.3.5 Social Services

Social services in the RMWB are delivered through the combined efforts of municipal and provincial governments, independent public agencies (i.e., school boards, regional health authorities), non-profit community organizations, and private companies. These organizations provide a wide range of services in response to social, psychological, employment, income, and crisis needs of residents.

The RMWB is part of the Region 9 Northeast Alberta Child and Family Services Authority (Alberta Human Services 2011, internet site). This agency is responsible for delivery of child and family services to the community, including child protection, foster care, adoption, family violence prevention, provision of services for children with special needs, and early intervention. The regional office is located in Fort McMurray.

The RMWB offers extensive social programs, complementing the provincial program which focuses on children and family welfare. The municipality is a member of Family and Community Support Services (FCSS), which is a partnership of the Government of Alberta, municipalities and Métis communities, to deliver a range of social support services. The municipality delivers programs such as family and personal counselling services, homelessness initiatives, outreach to seniors in the community, and information support to people in the community who are challenged by the cost of living.

The RMWB publishes the *Tough Times Handbook* (RMWB 2010e) as a resource for individuals and families with limited income in the RMWB. The handbook lists a number of free or low cost agencies that provide social services throughout the municipality including emergency food services, clothing services, housing and shelter, health care, support groups, children and youth services, parenting services and senior's services.

Demand is high for social services in the RMWB including child care, affordable housing and emergency housing. As well, there are limits to the social services framework in the community. The Salvation Army in Fort McMurray has been experiencing an increase in demand for community and family services and addiction services since June 2011 (Bunjay 2011, pers. comm.). Stress on families in the community occurs from long working hours, the high cost of

housing, scarcity of day care and after school care, addictions, and overcrowding.

Social service agencies also find the cost of housing and the high wages offered by oil sands companies a deterrent to attracting and retaining employees to the agencies. Additionally, costs of office space and program delivery are higher in the RMWB, yet provincial grants for funding are equalized across the province, meaning that program delivery costs are higher in the RMWB without indexing of grant funds (Shannon 2011, pers. comm.).

Residents of the RMWB donated almost \$7 million to the Fort McMurray United Way in 2010 and have been the highest per capita contributor in the country for the past five years (United Way 2011, internet site). Volunteerism is also high in the RMWB with over half of the region's population actively volunteering, which is more than twice the national average (Wood Buffalo Big Spirit 2011, internet site). Industry is also very supportive of social service agencies, primarily through the United Way but also through direct support of specific programs or donations (Pritchett 2009, pers. comm.; Shannon 2011, pers. comm.; Theberge 2009, pers. comm.).

1.3.3.6 Physical Infrastructure

The RMWB is responsible for providing physical infrastructure for the communities within the municipality. The 2011 budget for capital projects in the RMWB is approximately \$315 million, of which approximately \$215 million is allocated for public facilities, \$15 million for recreation and culture and \$85 million for transportation (RMWB 2011b). These consist of 114 projects, of which 26 are multi-year projects (RMWB 2011b). Urban based projects make up approximately 34% of the approved projects in 2011, regional projects make up approximately 58%, and rural projects make up the remaining 8% (RMWB 2011b).

Some of the capital budget challenges facing the RMWB include keeping pace with growth, maintaining the existing capital infrastructure, dealing with increasing capital construction costs, and providing an appropriate balance between infrastructure services and quality of life services (RMWB 2011h, internet site). The RMWB has noted that there is an average lag of five years in the municipality for infrastructure delivery (RMWB 2011b).

1.3.3.7 Recreation

The RMWB is responsible for providing recreation facilities to each of the communities within the municipality. The RMWB provides parks and recreation

projects (including trails, playgrounds and parks, sports fields, rinks and green spaces) and culture projects (including museums, cemeteries and other cultural facilities) to the communities.

Rural recreation opportunities in the RMWB include hunting, fishing, water sports, camping, berry picking and winter sports such as snowmobiling. These recreational uses are described in the Resource Use section (Volume 6, Section 3.2).

1.4 COMMUNITIES IN THE REGIONAL STUDY AREA

1.4.1 Fort McMurray

As the largest urban centre in the RSA, Fort McMurray is a regional service centre that provides services for both the urban and rural populations as well as industry. Fort McMurray has experienced rapid population changes in the past 30 years. In the early 1990s, population declined in Fort McMurray as companies struggled to make the oil sands profitable. The stagnant housing market and declining population changed almost overnight with a surge of capital investment in oil sands development in the early 2000s. The transition from a stagnant community to a thriving and overstressed community challenged Fort McMurray's infrastructure. Quality of life, determined by infrastructure, programs and community spirit, are key to building the future of Fort McMurray. Being able to attract and keep residents who will raise a family strengthens the social fabric of a community, and is possible with long term employment.

1.4.1.1 Housing

The decline in oil prices and global recession that resulted in a temporarily weaker housing market is turning around with housing prices increasing and vacancy rates declining in 2011. Development in the oil sands sector over the decade has resulted in high demand for housing and subsequently higher prices. Fort McMurray has approximately 74% of the population in the RMWB and consequently is the primary housing market for the region, especially for in-migrating oil sands workers. Although most construction workers are housed in camps, some are offered living-out allowances to take advantage of housing in Fort McMurray. Demand is high for all housing types, resulting in upward pressure on housing prices. The housing issues in Fort McMurray have several components:

- availability of various types of housing including affordable or low-income housing;

- affordability;
- timing of further housing development, including supplying infrastructure;
- availability of a construction workforce to build houses; and
- timely planning for and release of developable land from the Government of Alberta to the RMWB.

The Government of Alberta has recently released land and provided \$241 million in funding in support of two new subdivisions in Fort McMurray: Parsons Creek and Saline Creek Plateau (RMWB 2010a). In January 2011, the first five parcels of land for the future Parsons Creek community were put up for sale, which include 135 acres that will eventually become a community of about 24,000 residents. Development of the first parcels is expected to be completed in about two years. A proportion of the housing will be developed and administered through the WBHADC as affordable housing (Robertson 2011, pers. comm.). The Alberta government is investing \$166 million to develop the first phase of Parsons Creek with the proceeds from the land sales to be re-invested in the community as schools, roads and other infrastructure are developed (Government of Alberta 2011c). The future development of the proposed Saline Creek is also expected to add an additional 20,000 residents to Fort McMurray but there has been no public announcement regarding development schedule (including land release).

Housing prices, both for owned and rental accommodation, have been increasing for more than 10 years. Between 1995 and 2004, housing prices tripled (Alberta Auditor General 2005) while between 2007 and 2011, the change in average price of a single family dwelling increased by approximately 26%. In June 2011 a single family home sold for an average price of \$746,315 (Table 11).

Table 11 Sale Prices for Owned Accommodation in Fort McMurray (2007 to 2011)

Housing Type	Average Selling Price (\$)					% Change June 2007 – June 2011
	June 2007	November 2008	August 2009	June 2010	June 2011	
Single family dwelling	592,628	678,865	633,686	683,748	746,315	26
Multi-family dwelling	374,672	436,759	412,231	436,306	425,503	14
Duplex	458,827	573,500	478,964	539,719	530,544	16
Mobile home	70,167	45,000	n/a	35,000	105,000	50
Mobile home with land	378,050	436,822	394,361	403,029	449,675	19

*Source: Fort McMurray – Alberta, website, 2007, 2008, 2009, 2011.

n/a – not available.

Rental rates for all sizes of units were greater than \$1,400/month in April 2011 as shown in Table 12. Average rental rates remain similar to those recorded between 2007 and 2008. The apartment vacancy rate for Fort McMurray in April 2011 was 6.4% which is down from 13.4% in April 2010 (Fort McMurray – Alberta 2011, internet site).

Table 12 Rental Rate Changes for Accommodation in Fort McMurray between 2007 and 2011

Rental Unit	Average Monthly Rent				
	October 2007	October 2008	June 2009	April 2010	April 2011
Bachelor suite	\$1,263	\$1,444	\$1,448	\$1,397	\$1,441
One bedroom	\$1,724	\$1,829	\$1,853	\$1,706	\$1,727
Two bedroom	\$2,085	\$2,360	\$2,177	\$2,060	\$2,152
Three bedroom and more	\$2,263	\$2,468	\$2,492	\$2,410	\$2,357

Source: Canadian Housing and Mortgage Corporation at www.woodbuffalo.net.

Table 13 shows the average number of persons per household in Fort McMurray in 2006. The RMWB 2010 census indicated that the average occupancy for single family dwellings in Fort McMurray is 3.6 persons (RMWB 2010a). This has increased from 3.3 in 2006 which is higher than similarly sized communities in Alberta and higher than the national and provincial averages, indicating overcrowding may be occurring.

Table 13 Average Number of Persons per Household in 2006

Location	Average Number of Persons per Household
Fort McMurray*	3.3 (2.8**)
Canada**	2.5
Alberta**	2.6
Calgary**	2.6
Edmonton**	2.5

*RMWB 2010a.

**Statistics Canada 2006a.

Affordable housing in Fort McMurray is primarily provided by WBHADC. The WBHADC maintains several types of affordable housing programs including rental, purchase and senior housing. In 2011, WBHADC has the following housing available in Fort McMurray (WBHADC 2011, internet site):

- 1,191 rental units; and
 - 1,070 in the Family Housing Portfolio; and
 - 69 in seniors housing.

- 269 units in the home ownership (second mortgage) program.

The WBHDC has developed a 90 unit development in Prospect Pointe aimed at assisting public sector employers recruit and retain staff. One year leases are available to employees of major public sectors including the Fort McMurray Public School District (FMPSD), Fort McMurray Catholic School District (FMCSA), Alberta Health Services (AHS), RMWB, and RCMP. In 2011, WBHDC has sold 141 homes in Prospect Pointe and Meadow Creek Village through their affordable homeownership program and has recently opened 172 rental units in Sandpiper Cove in Eagle Ridge, expected to be fully subscribed in 2011 (WBHDC 2011, internet site). In any further land release from the Government of Alberta, a proportion will be designated for affordable housing and WBHDC will be the developer. Therefore more affordable housing will be developed over the next five years as Parson Creek and Saline Creek are developed, and demand is expected to continue to be high.

Seniors' housing is also available in Fort McMurray with two seniors housing buildings; Rotary House Lodge which contains 36 single unit and three double units, and Araubasca House and Legion Manner which has 30 one-bedroom units (WBHDC 2011, internet site). Approximately 20% of WBHDC housing is taken up by seniors.

1.4.1.2 Education

Fort McMurray has a total of twelve schools administered under the FMPSD offering kindergarten (K) to grade 12 to approximately 4,900 students (FMPSD 2011, internet site). Another nine schools are administered under the FMCSA offer kindergarten to grade 12 to approximately 4,300 students (FMCSA 2011, internet site).

The current and expected population increase of Fort McMurray is overwhelming the existing facilities in the FMCSA, which are currently 81% to 117% utilized (Fort McMurray Today 2011b). The district is predicting 1,400 new students over the next few years. Both school boards in Fort McMurray are challenged by the location of enrolment, where schools in some neighbourhoods are at capacity and others have lower enrolment numbers. The FMPSD cannot handle any more new students from kindergarten to grade 8 north of the Athabasca River; over 596 students have been added to schools on the north side from 2004 to 2010 (Fort McMurray Today 2011b).

A new public school, Ecole McTavish Junior High School, opened in September 2011 and has a core design to hold 1,100 students with 800 instructional spaces (FMPSD 2011, internet site). The FMPSD identified the

need for three new schools in Timberlea and future schools in the new Saline Creek and Parsons Creek subdivisions.

A new Catholic high school, Holy Trinity High School, which opened in September 2011. There was also a recent modernization of Father Mercredi High School which has transformed the school into a science and technology centre offering specialized programs and options in the areas of power engineering, robotics, instrumentation, automotives, fabrication (welding), and carpentry, in addition to the full range of the Alberta Education curriculum (FMCSO 2011, internet site; Jenkins 2011, pers. comm.). Even with the new school, the Fort McMurray Catholic School District expects that Holy Trinity High School will be at capacity within the next two years (Jenkins 2011, pers. comm.). The Government of Alberta recently announced funding for a new Catholic Elementary School (K-6) in the Eagle Ridge Development with a capacity for 600 students; it is expected to open in September 2014.

Post-secondary education is offered in the community through Keyano College, located in Fort McMurray.

1.4.1.3 Health Services Medical Facilities and Services

The main health care centre in Fort McMurray is the NLHC. Services provided at the NLHC include 24-hour emergency care, acute, continuing and intensive care facilities, surgical and radiology services and a medical laboratory. Outpatient and various specialty clinic services are also delivered through the centre. The NLHC has completed a facility plan for Fort McMurray, to meet long term health care needs; it is under review. Additionally, a Health Human Resource Plan and a Community Health Needs Assessment were carried out in 2008 (Friesen 2009, pers. comm.).

Recent investment by AHS in the NLHC includes a \$10 million project to improve a second phase of ambulatory care upgrades, emergency room renovations, and sewer and water upgrades (AHS 2010, internet site). The emergency room at NLHC was built to serve 35,000 visits per year, but it is currently seeing more than 60,000 visits (AHS 2010 internet site) while still maintaining low wait times, in part due to the large proportion of minor complaints (Bradley 2011, pers. comm.). A portion of emergency room visits are attributed by the NLHC to drop-in visits by mobile workers on construction projects or permanent residents without primary care physicians. Some of the visits are those that would normally be dealt with by primary care physicians, and the emergency room upgrades and announced Community Health and Wellness/Urgent Care Centre in Timberlea should help alleviate some of the demand on emergency services (Bradley 2011, pers. comm.). No completion date for the clinic has been

provided. First aid facilities on industrial sites also deal with some of the primary care issues of construction and operations workers.

1.4.1.4 Emergency and Protective Services

Policing

Policing is provided to Fort McMurray by the RCMP Wood Buffalo detachment, which also serves the other communities in the RMWB.

Crime statistics in the RMWB dropped significantly in 2009 (RMWB 2011d, internet site). Year-to-date crime statistics show an 18% decline in overall crime in Fort McMurray from 2008 to 2009. This reduction is in part attributable to some new crime prevention initiatives such as the Bait Vehicle Program and the Crime Reduction Team (RMWB 2011d, internet site). Fourth quarter results show that between October and December 2009, crime in Fort McMurray was down 22%. The downtown core of Fort McMurray saw a 25% decrease in crime from 2008 to 2009. Statistics within the downtown core also show a significant 20% decrease in person crime offences and a 30% decrease in property crime offences (RMWB 2011d, internet site).

Ambulance and Fire Services

The Fort McMurray Fire Department provides firefighting and ambulance services to both the rural and urban communities. Emergency Medical Services (EMS) are provided in Fort McMurray and also to the rural communities.

1.4.1.5 Social Services

Organizations in Fort McMurray provide a wide range of services in response to social, psychological, employment, income, and crisis needs of residents. Fort McMurray also has extensive social programs, complementing the provincial program which focuses on children and family welfare.

Indicators of social stress, such as drug and alcohol use and calls to the gambling help line, were higher in Fort McMurray than the provincial average in 2006. Adults requesting services from the Alberta Alcohol and Drug Abuse Commission Centre increased 36% from 2008 to 2010, however, youths requesting the same services decreased by 45% over the same time span (Bettin 2011, pers. comm.). In November 2010, AHS began offering a new day treatment program to offer free professional help for local residents struggling with alcohol, drugs, or gambling (AHS 2011a, internet site). The program provides individual and group counselling to adults and offers an alternative to residential treatment. AHS refers approximately 175 citizens from RMWB for

treatment annually (AHS 2011a, internet site). The Salvation Army in Fort McMurray has been experiencing an increase demand in their community and family services and their addiction services since June 2011 (Bunjay 2011, pers. comm.).

Homelessness has been a concern with 549 homeless people identified in Fort McMurray in 2010 (Table 14). The high cost of housing is contributing to homelessness for the working poor.

Table 14 Homeless Population in Fort McMurray from 2005 to 2010

	Year				
	2005	2006	2007	2008	2010
Homeless Population	232	405	441	441	549

Source: RMWB 2010a.

Fort McMurray offers a number of emergency and specialized housing options including:

- Stepping Stones Youth Services has a temporary shelter for homeless or at-risk youth and provides beds, clothing, food, employment, housing support, crisis counselling and family mediation support (Woods Homes 2011, internet site)
- Salvation Army Emergency Shelter offers a men-only shelter with 32 bed spaces. Both programs are full daily, regularly turning away people, especially in the winter (Pritchett 2009, pers. comm.). The Salvation Army also runs a transitional housing program which has constant demand.
- Salvation Army Mat Program operates in the winter evenings for men and women on a first-come, first-served basis and has space for 30 mats and is specifically designed for people who may be under the influence of drugs and alcohol (RMWB 2010e).
- Fort McMurray Family Crisis Centre Society operates an emergency shelter for women and children, crisis support and community awareness and events. The society also offers numerous other programs including a men's outreach program, early intervention and child development programs (FMMFCS 2011, internet site).
- The Centre of Hope is a drop in centre that provides social, medical and mental health services for the homeless and underemployed population of the community (RMWB 2010e).
- Unity House provides shelter and supportive services to women and women with children who are victims of domestic violence (RMWB 2010e).

- Marshall House, an emergency shelter operated by the WBHADC, provides emergency shelter and interim housing to assist individuals and couples with getting established. Marshall House is currently funded for 100 individuals (WBHADC 2011, internet site).
- The Support Through Housing Team Society (STHT) provides hard to house individuals and families in the community with the structure and support they need to address critical issues necessary to obtain and maintain permanent housing. Services are also provided to individuals at risk of losing their housing due to their circumstances.

In March 2011, AHS announced the Fort McMurray Homeless Health Improvement Initiative to improve the health of Fort McMurray's homeless population (AHS 2011b).

1.4.1.6 Physical Infrastructure

Fort McMurray is a fully serviced urban centre with electrical, telephone, natural gas, water and waste water treatment facilities and distribution and collection systems. The RMWB has recently completed new infrastructure projects in Fort McMurray. A new wastewater treatment plant was completed in 2010 which was designed to provide additional capacity for 133,000 residents and to expand to accommodate additional population growth; (RMWB 2011b). Also, pumphouse and booster station upgrades were completed throughout the community. There are several overpass projects on Highway 63 north of the city centre, designed to aid traffic flow past the current and proposed subdivisions. The AOSA CRISP includes plans for an eastern bypass route around Fort McMurray by 2014 and a ring road in Fort McMurray by 2025 (Government of Alberta 2011b).

Investment in infrastructure proposed in the RMWB 2011 Budget for Fort McMurray includes (RMWB 2011b; RMWB 2011h):

- Ongoing expansion of the Athabasca Water Treatment Plant which has been designed to increase capacity and meet environmental regulatory requirements.
- Construction of a Landfill Gas Management System, planned for 2011 to 2013. This technology will emit carbon dioxide rather than methane and therefore reduce greenhouse gas emissions.
- Ongoing lift station upgrades for the facilities at Mackenzie, Waterways and Gregoire where the existing infrastructure is close to 30 years old and equipment is operating beyond its design life span.
- Construction of new reservoir and pumphouse in Parsons Creek and Thickwood and additional pumphouse upgrades throughout the community due to age of infrastructure and the increase in population.

- Replacement of storm, sewer and water mains throughout Fort McMurray to accommodate growing population and replacement due to age of investment.

The slowing of the growth rate over the past few years has given Fort McMurray a chance to catch up on the infrastructure and services needed to support the growth over the past decade. The community of Fort McMurray is starting to gain the time and capacity to plan the future instead of catching up with the growth.

1.4.1.7 Recreation

Recreational opportunities in Fort McMurray include municipal and private facilities, such as the YMCA, Centennial Pool, Vista Ridge (a ski, ride and slide facility), Ptarmigan Nordic Ski Club, the Syncrude Sport and Wellness Centre at Keyano College, Casselman Lush Skateboard Park, and various parks, golf courses, athletic fields, and skating and curling rinks.

MacDonald Island Park has a variety of recreational opportunities including fitness centre, arenas, indoor track, waterpark, pool, curling, indoor fieldhouses, racquetball and squash, golf simulator and a community art gallery. There are also entertainment events including concerts and recreational programming for children, youth and adults. The recent expansion of these facilities at MacDonald Island added significantly to the recreation opportunities in Fort McMurray.

The RMWB maintains several trails in Fort McMurray such as the Birchwood trails which include over 130 km of running, walking and biking trails (RMWB 2011f, internet site).

RWMB is beginning a design phase for a new Thickwood multi-use facility with construction starting until 2015. There are subsequent plans for similar facilities in Saline Creek and Parsons Creek communities when they are complete.

Recreation facilities, even with the additional of MacDonald Island facilities, remain full. There is a need for more localized centres as there are currently no community based facilities and most recreation facilities in Fort McMurray require people to drive to them. There is also a need for before and after school care, although some is offered through schools.

1.4.2 Anzac and Gregoire Lake Estates

Located approximately 45 km southeast of Fort McMurray, the communities of Anzac and Gregoire Lake Estates are adjacent to Willow (Gregoire) Lake, which

is a local recreational area. Gregoire Provincial Park is located on the northwest side of the lake.

The population of Anzac is 785 and is growing more quickly than other rural communities in the RMWB (RMWB 2010a). Until recent population increases, the community was largely Métis. New residents are not necessarily Aboriginal, which is changing the character of the community. Due to the proximity to Fort McMurray and oil sands projects, the community is expected to grow rapidly (Government of Alberta 2011).

The population of Gregoire Lake Estates is 248, increasing from 206 in 2000 (RMWB 2010a). Gregoire Lake has limited growth due to physical constraints (such as Gregoire Lake and Secondary Highway 881) and development constraints (including the absence of available land to develop and the current zoning of the surrounding area for parks and environmental protection) (RMWB 2008a). Population growth in this community cannot occur without amendments to the Area Structure Plan (RMWB 2008a) and release of land from the Government of Alberta.

1.4.2.1 Housing

The population of Anzac has increased by 76% since 2000 and has resulted in increasing pressure on housing prices. The type of accommodation available in Anzac consists of single detached dwellings, apartment/condo and manufactured homes. Prices are similar to Fort McMurray with listings for manufactured homes with land ranging from \$300,000 to \$700,000 or houses on 1 to 2-acre lots ranging from \$400,000 up to \$700,000 (MLS 2011, internet site). There is a new multi-unit development that was completed in 2010 with prices for a two bedroom condo listed at over \$250,000 (Multiple Listing Service; MLS 2011, internet site). In Anzac approximately 82% of people own the dwelling they live in and approximately 18% rent (RMWB 2010a). The WBHADC has four seniors' homes in Anzac.

Gregoire Lake was originally designed for summer residences, but has now evolved to include permanent rural residential homes with no commercial or industrial development as regulated by the MDP (RMWB, 2000). Further development within the community is not permitted under the MDP. The population in Gregoire Lake Estates has increased 20% since 2000. Housing prices are similar to those of Anzac and Fort McMurray with homes listed at over \$500,000 (MLS July 2011). The type of accommodation in Gregoire Lake Estates consists of single detached dwellings and manufactured homes. Gregoire Lake Estates approximately 93% of people own and around 7% of

people rent or lease (RMWB 2010a). There is no designated affordable housing or senior's housing available in Gregoire Lake.

1.4.2.2 Education

Anzac and Gregoire Lake Estates fall within the Northland School Division No. 61. The Anzac Community School has current enrolment of 101 students from kindergarten to grade 6 and has 8.5 teachers and 4.5 paraprofessionals (Northland School Division 2011, internet site). Northland School Division recently completed Bill Woodward School a new grade 5 to 12 school in Anzac. The school was developed for 300 students, but can accommodate 400 (RMWB 2008b). The schools serve students from Anzac, Gregoire Lake Estates and the Fort McMurray First Nation. Prior to the completion of the school, students had to attend junior high and high school in Fort McMurray, travelling by bus. The cost of housing is considered an important consideration for the attraction of new teachers (Jenkins 2011, pers. comm.). The Northland School Board is currently offering subsidized housing to potential teachers

1.4.2.3 Medical Facilities and Services

AHS provides for community health care and home care nurses to visit the community once a week. The community hall serves as the centre for delivery of health and social services. Acute care is available in Fort McMurray.

1.4.2.4 Emergency and Protective Services

Policing is provided by the rural division of the RCMP in Fort McMurray. Local oil sands developers have contributed to enhanced policing in the community, largely related to traffic patrol on Secondary Highway 881.

Anzac has a volunteer fire department. The 2011 RMWB Budget includes \$300,000 for the replacement of the Anzac Fire Department water tanker (RMWB 2011h). There is also a proposed fire hall expansion in the 2011 to 2017 Capital Plan which proposes a design phase in 2012 and construction in 2013 (RMWB 2011h). Ambulance service in the community is provided from the Fort McMurray Fire Department. This community has access to a 911 call centre administered in Fort McMurray.

1.4.2.5 Social Services

Social services are provided by the Family and Community Support Services organization and Alberta Child Services. Family and Community Support

Services provides programs on-site. The community hall serves as the centre for delivery of social services.

1.4.2.6 Physical Infrastructure

Anzac has electrical, telephone, natural gas, and water and wastewater treatment facilities. Domestic solid waste is trucked to the regional municipal landfill. Water is trucked from the treatment plant to cisterns at individual dwellings, and individual septic tanks are used for residential wastewater collection before being emptied and trucked to a sewage lagoon for treatment. Water treatment facilities are centrally located in the Hamlet. The facilities are functioning near capacity for the community. Construction of a new water line from Fort McMurray was completed in 2008.

The current facility is under-sized for the existing population and is limiting growth in the area (RMWB 2011b). The new Anzac wastewater treatment plant and effluent link to the Christina River is expected to be constructed between July 2011 and December 2012 (RMWB 2011g, internet site). Other projects proposed in the Capital Plan include:

- Upgrade the Anzac sewage lagoon which is required due to age and to meet population increases (proposed from 2010 to 2013) (RMWB 2011h, internet site).
- Construction of a water distribution and sewage collection system in Anzac (proposed design in 2013 and construction in 2014 to 2018) (RMWB 2011h, internet site).

Gregoire Lake Estates is currently on a truck fill system for water. Alternative water servicing for this area is being investigated with a design phase proposed for 2012 and construction in 2013 to 2014 (RMWB 2011h, internet site).

1.4.2.7 Recreational Facilities and Programs

The Anzac Recreation and Social Society operate the community hall and organize community events such as the winter fair and community dances, and maintain the day use park, ball fields and various green spaces throughout the community including the cemetery. The Willow Lake Community Association, which represents both Anzac and Gregoire Lake Estates on community issues, is also active in the community (RMWB 2011c).

The RMWB will be constructing a new trail between Gilmore Drive and the school in Summer/Fall 2011 (RMWB 2011f, internet site). The RMWB has also

proposed a new multiuse facility in Anzac, with construction budgeted for 2014 to 2017 (RMWB 2011b).

1.4.3 Fort McMurray No. 468 First Nation Reserve at Willow Lake

The FMFN reserve at Willow (Gregoire) Lake is west of Anzac and borders the south side of Willow Lake. The FMFN has three reserves located near Anzac (176, 176A and 176B) with 176 being the largest and most populated. The registered population of the FMFN is 633 people, and approximately 258 people live on the reserve (AANDC 2011, internet site). The lands around the reserve are the traditional lands of the FMFN and include areas of plant gathering, trails to the gathering places at Gypsy and Gordon Lakes, and hunting, fishing and trapping lands. Members of the community have raised concerns over housing and traffic.

1.4.3.1 Housing

There are around 60 private dwellings located on FMFN Reserves at Gregoire Lake (Statistics Canada 2006). Housing is limited and there are more occupants per dwelling than the provincial average (Statistics Canada, 2006).

1.4.3.2 Education

Children from the reserve can attend school in either Anzac or in Fort McMurray for all grades, both requiring bussing. Canadian Natural supports a summer student program for the community.

1.4.3.3 Medical Facilities and Services

A community health clinic is based on the reserve and staffed through the AHS, with acute health care and doctor services available in Fort McMurray (ATC 2009, internet site).

1.4.3.4 Emergency and Protective Services

Policing is provided by the rural division of the RCMP in Fort McMurray. Fire protection is provided by the Anzac Volunteer Fire Department. Ambulance service is provided from the Fort McMurray Fire Department. FMFN has access to a 911 call centre administered in Fort McMurray. There is no resident doctor in the community (ATC 2011, internet site).

1.4.3.5 Social Services

Alberta Family and Social Services located in Fort McMurray provide a full range of child welfare services to FMFN members through weekly visits by a social worker (ATC 2011, internet site). The community also has a drug and alcohol awareness campaign as part of the National Native Alcohol and Drug Abuse Program (NNADAP) for youth at risk and a dedicated staff member for the program. Additionally, the Mark Amy Treatment Centre is located on the reserve at Willow (Gregoire) Lake; it is the only residential adult treatment centre in the Wood Buffalo region. The Fort McMurray First Nation hires one half time social worker to deliver the Income Security Services program (ATC 2011, internet site).

1.4.3.6 Physical Infrastructure

The community is serviced by electricity and telephone service. There is a central water treatment plant with truck delivery to individual houses. A sewage lagoon is in operation.

1.4.3.7 Recreation

Community recreation facilities include the Band Hall, a baseball diamond, skating rink, Pow-Wow grounds and access to beaches on Gregoire Lake (ATC 2011, internet site).

1.4.4 Chipewyan Prairie Dené First Nation Reserve at Janvier and Janvier

The municipal Hamlet of Janvier (RMWB designation) and the Chipewyan Prairie Dené First Nation (CPDFN) reserve #194 at Janvier are south of Fort McMurray, just east of Secondary Highway 881 (Figure 1). The CPDFN have three reserves (194, 194A, and 194B) with 194 being the most populated and located on Secondary Highway 881. Janvier is also known as Chard (Canada Post designation and railroad siding designation). Janvier is a community partly in the RMWB and partly on the CPDFN reserve, with some services shared between Janvier and CPDFN, reflecting the adjacent and interconnected position of the communities.

Until the highway was built in the mid-1980s, the communities were very isolated, with access to Lac La Biche or Fort McMurray via railway or aircraft. The population is primarily Aboriginal, with Métis and some First Nations living off reserves in the Hamlet.

The CPDFN has 748 registered members, of whom 344 are listed as residents on the reserve (Alberta Municipal Affairs 2011). The municipal Hamlet of Janvier had a population of 195 in 2010 (RMWB 2010a).

1.4.4.1 Housing

Housing availability on CPDFN reserve at Janvier is limited, as funds are not available to build new homes or expand existing homes (Cenovus 2010). There are approximately 97 dwellings on the CPDFN reserve and just over 50 houses in Janvier, all consisting of single family housing (INAC 2011; Nokohoo 2007, pers. comm.; RMWB 2010a). The type of accommodation available in Janvier consists of single detached dwellings and manufactured homes (RMWB 2010a). The condition and maintenance of housing in Janvier and the Janvier IR 194 has also been noted as an issue for local residents (Cenovus 2010), although renovations have been taking place (Kearns 2007). Approximately 72% of people in Janvier own the dwelling that they live in and 28% rent (RMWB 2010a). In December 2011, there were no residences in Janvier listed for sale on the MLS website (MLS 2011a, internet site).

The population in Janvier in 2010 was similar to the population in 2000 only increasing by 5%; however, population numbers have not remained steady as there was a large increase in population in 2006 and a decline in 2007 (Table 1; RMWB 2010a). On CPDFN reserve, the population has increased by 54% since 2000, but has been stable over the last few years. The RMWB 2010 census indicates an average of 3.4 persons per single family dwelling in Janvier, and 2.8 persons per manufactured home or semi-detached dwelling (2010a).

In Janvier, the WBHADC has eight single-family units available. The units are a mix of 2, 3 and 4 bedroom units, which were based on the community demand at the time; however, recently the wait list has changed and the largest demand is now couples and single men and women looking for accommodation (Cenovus 2010). The WBHADC has decided that the new and existing units (as they become available) will now only be available for rent due to rising construction costs and costs associated with lot servicing and land development (Cenovus 2010; Robertson 2011, pers. comm.). There are currently no plans to build more units as the WBHADC does not currently own any additional land suitable for development (Cenovus 2010; Robertson 2011, pers. comm.). There is no specific housing for elders; specialized housing is available in Lac La Biche or Fort McMurray.

1.4.4.2 Education

Father R. Perin School is located in Janvier, providing kindergarten to grade 9, with an enrolment of 80 students (Northland School Division 2011, internet site).

Capacity of the school is 130 students. Enrolment numbers at the school vary as some families move away and return, sometimes within the same school year (Cenovus 2010.) Currently, eight teachers and 3.8 para-professionals are employed at the school (Northland School Division 2011, internet site). The school is currently recruiting a principal. The school population is drawn from Janvier and the CPDFN. Students from Janvier attend high school in Fort McMurray. First Nations children are eligible to attend Grades 10 to 12 at the Chipewyan Prairie Dené High School in a new facility in the community multiplex.

Keyano College offers outreach programs to Janvier and CPDFN, to help adult learners upgrade basic academic courses and earn high school equivalency diplomas.

1.4.4.3 Medical Facilities and Services

The Janvier Health Centre provides medical services under the administration of the First Nations and Inuit Health Branch of Health Canada. A level of emergency services is available at the clinic on the CPDFN reserve, but more acute health care or broader services must be obtained from either Fort McMurray or Lac La Biche.

1.4.4.4 Emergency and Protective Services

Police services are provided to Janvier by the RCMP Wood Buffalo detachment based out of Fort McMurray. Starting in 2008 two full-time RCMP officers were funded by oil sands companies, to provide services to Janvier and Conklin. Community members have noticed a decreased in crime and vandalism since the program was implemented (Cenovus 2010).

Janvier has a volunteer fire department. There is a fire hall adjacent to the community centre, built within the last five years. The fire department has a water tanker truck purchased in 2006. There is also a fire truck on the reserve. Additionally, Janvier has a mutual aid agreement with ASRD for forest fire protection. Ambulance service in the community is provided by the Fort McMurray Fire Department. The community has access to a 911 call centre administered in Fort McMurray.

Emergency response planning is the responsibility of the RMWB.

1.4.4.5 Social Services

Social service programs are delivered through the Janvier Family Resource Centre, which is part of the Region 9 Northeast Alberta Child and Family

Services Department. The programs have a focus on family and youth outreach, with a wide variety of programs in the community. There is a focus on drug prevention and addiction programs.

Alberta Family and Social Services located in Fort McMurray provide a full range of child welfare services to CPDFN members (ATC 2009, internet site).

Oil Sands Leadership Initiative (OSLI) is supporting a sustainable community pilot project, self-directed by the youth of the community, to determine what projects the community wants to undertake (OSLI 2011 internet site).

1.4.4.6 Physical Infrastructure

The community has access to electricity, telephone and natural gas services. Janvier and the CPDFN reserve are on a truck fill system for water supply. A new raw water intake is under construction to maintain supply from the Christina River to the water treatment plant (RMWB 2011h, internet site). A sewage treatment facility exists in Janvier, but most residences have septic tanks that are pumped and trucked to the treatment facility. The sewage treatment facility is at capacity and the sewage lagoon requires an upgrade to meet environmental regulation. A design phase is proposed in the RMWB budget for 2013 and construction is expected in 2014-2015 (RMWB 2011h, internet site). Individual septic systems are also found on the CPDFN reserve. The municipality is building a transfer station in Janvier to collect waste and recycling materials (RMWB 2011h, internet site). The former waste dump is closed and waste is now being trucked to the regional landfill.

1.4.4.7 Recreation

There are minimal formal recreation facilities in Janvier; however, there is a community hall. Many inhabitants enjoy outdoor pursuits such as hunting, fishing, berry picking, snowmobiling and other outdoor recreations.

The CPDFN reserve has a multiplex recreational and educational facility, a hockey rink and baseball diamond.

1.4.5 Conklin

Conklin is approximately mid-way between Lac La Biche and Fort McMurray, accessed from Secondary Highway 881. Until the highway was built in the mid-1980s, this community was very isolated, with access to Lac La Biche or Fort McMurray via railway or aircraft, only. Residents are primarily Métis with an increasing influx of new residents of non-Métis heritage.

1.4.5.1 Housing

Housing availability is limited in Conklin. Single-family privately owned dwellings are most common. New housing subdivisions are allowed in the Area Structure Plans, but their development depends on the upgrade of water and wastewater facilities, and availability of land. Development of multi-family dwellings is also limited by the preference in the Hamlet for larger 1- to 2-acre lots. Approximately 80% of people in Conklin own the dwelling that they live in and approximately 20% rent or lease (RWMB 2010a). In December 2011, two properties were listed for sale, one at \$459,900 and one at \$545,000 (MLS 2011a). Housing prices have increased significantly over the past few years. As prices continue to increase, many residents are renting out portions of their lots for trailers and recreational vehicles, often to multiple tenants, to make supplemental income (Grandinson, 2011. pers. comm.). As with the rest of the RMWB, the land surrounding Conklin is owned by the provincial government which provides an additional constraint to growth.

The CRDAC has raised concerns about housing in Conklin as, increasingly, long-term residents are unable to afford land or homes in the community, leading to conflicts between residents and “outsiders” who have moved in and bought property (Cenovus 2010).

Up until 2006 the population of Conklin was increasing sharply. This population increase did not result in increased house building, as people moved in with members of their family already living in Conklin. With increased persons per household there was overcrowding. The 2010 municipal census indicates the average number of people per single family dwelling is 3.8, and 3.2 persons per manufactured home (RWMB 2010a).

The WBHADC has two housing developments in the Hamlet, with several newer duplex units consisting of 2, 3 and 4 bedroom houses. Although these units met the demand of families with children at the time when they were built, the community is seeing an increase in couples and singles looking for a place to live as they return to the community for work (Cenovus 2010). There currently are no plans for WBHADC to build additional units and the new and existing units are part of the rental program (Robertson 2011, pers. comm.). Development by WBHADC is constrained by lack of land for new projects (Robertson 2011, pers. comm.). There is a concern in the community that new housing lots or houses built by WBHADC will be priced higher than local residents can afford, limiting their ability to remain in the community (Theberge 2009, pers. comm.). There is no specific housing for elders. Specialized housing is available in Lac La Biche or Fort McMurray.

There are three open camps located at or near the Conklin access off Highway 881 that can provide lodging for over 750 people. These camps provide accommodation and board to construction and service personnel working on oil sands or other developments in the area. The AOSA CRISP outlines a plan for a work camp community located south of Conklin that can accommodate up to 5,000 people.

1.4.5.2 Education

The Conklin Community School is part of the Northland School Division and provides kindergarten to Grade 9 with a complement of four teachers and 2.5 para-professionals. Capacity of the school is 50 students and enrolment is 31 students (Northland School Division 2011, internet site). Students from Conklin attend high school in Fort McMurray or Lac La Biche, requiring boarding arrangements, which can create a significant barrier to completing school. As a result, many youth in the community are not attending high school (Cenovus 2010). Teacher housing is provided in the community. Teacher retention and continuity of the school are concerns in the community. Attraction of teachers is a challenge.

Keyano College, based in Fort McMurray, provides adult upgrading programs through its learning centre in the Conklin community hall.

1.4.5.3 Medical Facilities and Services

Community health nurses from Fort McMurray deliver health services once a week in the community centre in Conklin. The program provides basic health assessments for seniors and minor first aid, as well as postnatal assessment, school immunization, community education programs and home visits to recuperating residents. Dental outreach programs are provided each month. Acute care health care is available in either Lac La Biche or Fort McMurray. Residents of the community have expressed the need for a health facility and additional medical services to meet the needs of the community and the growing camp populations surrounding Conklin (Cenovus 2010).

1.4.5.4 Emergency and Protective Services

Policing is provided by the rural division of the RCMP in Fort McMurray and Janvier. No police facilities are located in the community of Conklin. Local oil sands companies have funded a pilot project providing two full-time RCMP officers for Conklin and Janvier, based out of Fort McMurray. While community members noticed a decrease in crime and vandalism since the program was implemented (Cenovus 2010), policing is still a concern for the community.

Conklin has a volunteer fire department and they have a mutual aid agreement with ASRD for forest fire protection. Ambulance service in the community is provided from the Fort McMurray Fire Department. This community has access to a 911 call centre administered in Fort McMurray.

Emergency response planning is the responsibility of the RMWB.

1.4.5.5 Social Services

Social service programs are delivered through the Family Resource Centre, administered by the AHS. Programs focus on family and child wellness. The community has concerns over drug and alcohol abuse, overcrowding and youth at risk.

Conklin has a community centre where the municipality maintains an office, Keyano College delivers high school upgrading classes, the Family and Community Support Services are delivered and the Northern Lights Health Centre delivers a weekly health clinic. Local commercial developments include a gas bar, post office, basic store, and camps which cater primarily to the oil and gas industry. Education and community health services are available in the community, though acute care or broader services must be obtained from either Fort McMurray or Lac La Biche.

1.4.5.6 Physical Infrastructure

Infrastructure in Conklin includes electrical, telephone, natural gas, a water treatment facility providing potable water is in place in the community. The water treatment plant is currently being upgraded and will be built to meet environmental regulatory requirements and the projected growth in water demand (RMWB 2011h, internet site). The current limit on commercial use of Conklin's treated water is in place to ensure access for residents. There is a sewage lagoon. Individual properties have septic tanks from which sewage is trucked to the sewage lagoon for treatment. The design and construction for wastewater treatment plant upgrade is proposed for 2013-2014 (RMWB 2011h, internet site). The Class 2 landfill at Conklin was closed at the end of 2009 and solid waste is now sent to the regional landfill at Fort McMurray. A transfer station is being built in Conklin to collect waste and recycling materials. Several privately operated airstrips in the area include a grass airstrip at Conklin, used for emergency medical evacuation, the Leismer airstrip located 12 km away and other industry owned air strips used for transportation to and from large facilities.

1.4.5.7 Recreation

The formal recreation facilities in Conklin include a baseball diamond and a playground at the school. There is a community hall with multiple uses. A new skating rink with a warm-up shelter and a multi-use pad have been constructed. Many residents enjoy outdoor pursuits such as hunting, fishing, berry picking, snowmobiling and other outdoor recreations, particularly with Christina Lake adjacent to the community. An audit will be undertaken to assess the community's recreational needs (Mulhall 2011, pers. comm.).

Christina Lake Lodge, a hotel and fishing resort, is located east of the community on Christina Lake. Accommodation is available to the public, both industry workers and recreationalists.

1.4.6 Lac La Biche County

Lac La Biche County was created after the Town of Lac La Biche and Lakeland County amalgamated on August 1, 2007. Lac La Biche County includes the Hamlets of Lac La Biche and Plamondon and several smaller communities including Venice, Hylo, Owl River, Avenir, and Rich Lake. The Beaver Lake First Nation and Heart Lake First Nation reserves border the County, as do the Métis settlements of Kikino and Buffalo Lake. Several subdivisions have been created in the County, primarily along the shores of Lac La Biche.

Prior to the amalgamation, the Town of Lac La Biche and Lakeland County submitted written statements to the Government of Alberta Oil Sands Multi-Stakeholder Committee Consultation Panel (Lac La Biche – Lakeland County Economic Development Partnership, undated; LLBRICC 2007), which indicated the municipalities were supportive of continued oil sands development, particularly south of Fort McMurray, as they identified capacity in housing lots, education and municipal infrastructure to meet increasing demand from population. Additionally, they identified economic development as important to their citizens and look forward to the opportunity to participate in oil sands development. This support continues in 2011 and Lac La Biche County feels that it is well positioned to grow as a service centre for the energy industry and has made industry relations a priority (Coleman 2011, pers. comm.).

A planning study undertaken by Lakeland County in 2006 (Urban Systems 2006) indicated that population renewal is a vital concern for the community, to encourage young members to remain or return, and to ensure that the service level demanded by an increasing recreational and retired population can be supported by a vibrant working age and permanent population.

Lac La Biche County is funding a regional development corporation, made up of local stakeholders and business people, which will provide economic services to the County. One of the focuses of the regional development corporation will be to promote Lac La Biche County as a service centre to the southern steam assisted gravity drainage (SAGD) producers (Coleman 2011, pers. comm.).

The development of oil sands projects around Conklin is increasing the use of Lac La Biche County as a service and staging centre for these developments. Most of the developments that identify Lac La Biche as a preferred service centre are located in the RMWB. The location of the developments in the RMWB means that the eventual tax revenue will go to the RMWB while the increasing social pressure of development (e.g., affordable housing) may focus on Lac La Biche. Any change in the municipal boundaries, as currently under review, may change the tax base for Lac La Biche County.

The Hamlet of Lac La Biche is the main service centre for Lac La Biche County including provincial government services, education, health and social services, RCMP, ambulance and fire protection services. The Hamlet and the other communities of the County are discussed together.

1.4.6.1 Housing

In the Hamlet of Lac La Biche, there is a full range of housing including single family dwellings, multi-family dwellings, affordable housing, rental accommodation and senior's accommodation. In the County, there are mostly single family dwellings, except in Plamondon where some multi-family housing exists. In the last five years, Lac La Biche County experienced both a spike and a drop in residential development permits. Residential development permits reached their highest point in 2008 with close to 200 new permits, but this number dropped sharply to 88 in 2009. In 2010, residential development permits started to recover and increased by almost 20% to 104 (Lac La Biche County, 2011a internet site). Three thousand new subdivision lots have been planned for development in Lac La Biche County over the next five years (Lac La Biche County 2011b, internet site), several of them on the east and north sides of Lac La Biche (the lake) and within daily commuting distance of approximately 100 to 120 km of the oil sands developments near Conklin. Capacity to build homes is constrained by competition for tradespeople, and developers are not building speculation homes (Coleman 2011, pers. comm.).

Demand for housing in Lac La Biche and the rest of the County reflects immigration of people who work in Fort McMurray but have permanent or recreational residences in Lac La Biche, retirees from other communities, and people moving to the area for economic opportunity. Local realtors have

indicated that up to 50% of the home buyers are from Fort McMurray looking for recreational or retirement homes, or planning to commute to work in Fort McMurray (Dechaine 2011, pers. comm.).

Municipal records indicate that the number of new dwellings has been increasing in the County over the past three years but total housing starts have slowed (Table 15).

Table 15 Number of Dwellings in Lac La Biche County

Year	Number of Dwellings ^(a)	Total Housing Starts ^(b)
2007	3,848	139
2008	4,384	108
2009	4,468	75

^(a) Community profiles compiled by Alberta Municipal Affairs (2011, internet site).

^(b) Community Futures 2011.

There were 10 three bedroom single family dwellings within or near the Hamlet of Lac La Biche listed on the MLS in July 2011. The listed price of these dwellings ranged from \$194,000 - \$519,900 (MLS 2011, internet site). Houses listed for more than \$350,000 stay on the market for many months and sell infrequently (Dechaine 2011, pers. comm.). During the global economic slowdown that started in 2008, the recreational and cabin housing market slowed considerably (Dechaine 2011, pers. comm.). The County also has two “ready-to-move” manufactured home companies ((Dechaine 2011, pers. comm.).

In 2010, there were 217 rental units in the Hamlet of Lac La Biche. The changes in rental vacancy rates and rental rates since 2001 are summarized in Table 16. The change in vacancy rate between 2001 and 2006 reflects the building of some multi-family housing. The decline in number of units available to rent and in the vacancy rate between 2006 and 2007 and 2008 represents the conversion of some units to condominiums in 2007.

Table 16 Rental Rate Changes for Accommodation in the Hamlet of Lac La Biche in 2001, 2006, 2007, 2008 and 2010

Rental Unit	2001 Average Rent	2006 Average Rent	2007 Average Rent	2008 Average Rent	2010 Average Rent	Vacant Units in 2010
One Bedroom	\$509	\$599	\$740	\$795	\$849	9 out of 84 or 11%
Two Bedroom	\$634	\$726	\$844	\$893	\$1000	13 out of 115 or 11%
Three Bedroom	\$634	\$739	\$927	\$968	\$1,101	3 out of 18 or 17%
Overall Vacancy Rate	1.8%	9.6%	4.3%	4.3%		25 out of 217 or 12%

Source: 2001 – 2008: Apartment Vacancy and Rental Cost Survey, (Alberta Municipal Affairs 2008, internet site).
2010: Housing and Urban Affairs 2011 internet site.

With increasing prices for both owned and rental properties and increasing competition for housing, affordable housing is limited in Lac La Biche County.

There are a variety of student accommodations available for Portage College students including:

- two to four bedroom townhouses for families;
- single and double occupancy residence for single students;
- non-shared townhouse room; and
- on campus hostel (Portage College 2011 internet site).

Senior's housing is available both in the town of Lac La Biche and in Plamondon. A seniors' lodge in Lac La Biche, Lacalta Lodge, has been recently completed and has 60 units. Additionally there are over 45 seniors and low-income housing units administered by the Greater North Foundation. The Greater North Foundation is a charitable organization that is funded in part by the Government of Alberta and serves a number of northern Alberta communities. The Greater North Foundation provides safe, comfortable and affordable housing for individuals and families of all ages, including seniors.

1.4.6.2 Education

Primary and Secondary Education

Primary and secondary schooling from kindergarten to grade 12 is available in Lac La Biche and Plamondon, and post-secondary schooling is delivered through Portage College. There are ten public schools operating in Lac La Biche County under the jurisdiction of the Northern Lights School Division. These schools offer provincially certified instruction for kindergarten to grade 12 and offer language training in French, Cree, Arabic and Russian (Lac La Biche Region 2011, internet site). École Beauséjour Plamondon which is administered by the East Central Francophone Education Region No. 3, which provides kindergarten to grade 12 for over 150.

In total, Northern Lights School Division offers kindergarten to grade 12 to approximately 1,900 students in Lac La Biche County. Capacity bottlenecks in the current school infrastructure will be alleviated through a new high school scheduled to be built in the Bold Centre Multiplex in 2014.

In the past, the Northern Lights School Division was concerned that low availability of affordable housing was a cause of attraction and retention difficulties, particularly for support services and buildings trades, necessary for

upkeep and maintenance. The school board is unable to respond to upward pressure on wages and is facing shortages of support staff.

The high school offers trades programs through the Registered Apprenticeship Programs (RAP), which allows high school students to take the introductory portions of certain trades training and directly transfer to college programs. The J. A. Williams high school received \$1 million in capital funding for a high school trades teaching facility, and works closely with Portage College on trades curriculum (Moghrabi 2007, pers. comm.).

Portage College

Portage College is a public board-governed college operating under the *Alberta Colleges Act* (Portage College 2011 internet site). The College was founded in 1968 in the community of Lac La Biche. Since that time the College has grown to include campuses in nine communities and “is proud to be the first choice for learners in northeast Alberta” (Portage College 2011 internet site). In the 2009 to 2010 school year courses were delivered to students with 1,099 Full-Load Equivalencies (FLE) (Portage College Comprehensive Institutional Plan 2011 to 2014). Over 50% of Portage College FLE students are located at the Lac La Biche campus.

Portage College has its main campus in Lac La Biche, offering many certificate and diploma programs in nine program offerings. The major study areas courses include:

- Academics for Careers and Educations;
- Business programs;
- Human services;
- Native Cultural Arts;
- Power Engineering 3rd and 4th Class;
- Trades and Technical;
- University studies and transfer program;
- Aboriginal teacher education programs – in partnership with the University of Alberta; and
- Continuing education opportunities through partnerships, particularly in oil and gas related fields.

In response to the Government of Alberta freezing grants at 2009-10 levels, Portage College cut \$1.68 million in costs through a reduction in non-academic

services and by cutting close to 20 full-time-equivalent staff (Portage College 2011). Additionally, loss of federal funding for Aboriginal programs delivered off-reserve has resulted in a decline in Aboriginal enrolment. Despite these cutbacks the college will continue to offer programs as long as there is a demand from students (Keough 2011, pers. comm.).

While enrolment has been relatively constant over the past number of years the distribution of students in each program has changed. Enrolment in academic upgrading has been steadily decreasing while enrolment in trades and technical programs has increased (Keough 2011, pers. comm.).

The college is tailoring many programs so that graduates are ready to work in the growing oil sands development field (Keough 2011, pers. comm.). Industry support of Portage College is also growing, with several oil sands developers making donations to the college or developing customized programs (Keough 2011, pers. comm.). For example, industry has partnered with the college to help fund programs such as:

- heavy equipment operator;
- heavy equipment technician;
- potable municipal water treatment; and
- saline and brackish water treatment (Portage College 2011).

1.4.6.3 Medical Facilities and Services

Lac La Biche has an acute care facility; the Lac La Biche (William J. Cadzow) Healthcare Centre with 23 acute care beds. In addition, the facility also includes an extended care unit with rehabilitation services. The treatment area for the health centre is broad, extending north to include Conklin, Janvier and Wandering River, and east, south and west of Lac La Biche. This facility provides services including emergency room treatment, inpatient treatment, obstetrics, and general surgery. Emergency room visits at the Health Centre peaked in 2005 but have been either slowly decreasing or holding steady since then (Moehrle 2011, pers. comm.). Overall, the development of the oil sands in the region is not burdening the health centre, however, some oil sands workers have arrived at the health centre in groups with minor injuries and illnesses, which can create short term spikes in emergency room visits (Moehrle 2011, pers. comm.).

There are 11 family doctors in Lac La Biche, but it is sometimes difficult to book timely appointments (Moehrle 2011, pers. comm.). The community also has two dental clinics, a denture clinic, four pharmacies, an optometrist, two

chiropractors, a holistic health centre and ground and air ambulance services (Community Futures 2011).

1.4.6.4 Emergency and Protective Services

The Lac La Biche detachment of the RCMP provides policing for the County, which includes Secondary Highway 881 north of Lac La Biche to just south of Conklin. There are 18 members in the detachment. The demand for policing includes drug- and alcohol-related crimes, property crimes, and violent crimes.

Protective Services in the County is coordinated by the Protective Services Department which is responsible for Municipal Bylaw and Provincial Statute Enforcement, Animal Control Services, Fire Department and Disaster Services Management and Administration. Protective Services also employs three peace officers who respond to emergencies and assist rescue personnel.

The County's volunteer fire department includes 75 firefighters:

- 6 pump trucks;
- 5 tankers;
- 2 rescue units;
- 2 support units; and
- 1 spill response trailer (Newton 2001, pers. comm.).

Protective Services receives emergency response plans from industrial projects; however, no coordination of emergency response is currently taking place (Newton 2011, pers. comm.). Lac La Biche County has seen a decline in total criminal activity from 2006 to 2009, with a recent increase in 2010 (Coleman 2011, pers. comm.). As with total criminal activity, criminal traffic investigations had been declining from 2006 to 2009, but increased in 2010 (Coleman 2011, pers. comm.). This trend is reflected in impaired driving investigations. The number of motor vehicle incidents within Lac La Biche County increased in 2010 to a five-year high of 761. The majority of this increase is due to a higher number of reportable (vehicle damage greater than \$1,000) incidents (Coleman 2011, pers. comm.).

1.4.6.5 Social Services

Lac La Biche is the provincial government delivery centre for numerous social services including mental health, child and family services, alcohol and drug abuse counselling, human resources and employment services. There is a Youth

Assessment Centre in the community, providing residential treatment for youth in crisis. Family and Community Support Services (FCSS) supports or runs several programs (Poltaruk 2011, pers. comm.) including:

- Hope Haven Women's shelter – fully staffed to provide emergency shelter and counselling to women and children in family crisis. The shelter has recently been expanded and now has capacity for 21 women, but the facility is often at capacity.
- Men's shelter program.
- Parent Link – offers programming and resources for parents and their children between 0 and 6 years of age
- Community events (e.g., Family Day festival).
- Volunteer appreciation events.
- Welcoming Communities – programming for new members of the community.
- Income Tax filing support for seniors.
- Anti-family violence initiative – This is a new program that has had excellent success. The program includes 12 modules that do not have to be taken in sequence and helps participants recognize and control family violence issues.
- The community resource directory.

There is a daycare at Portage College and several other private daycares located in the County.

Aboriginal social services include the Aboriginal Headstart Program to help children develop skills necessary for successful learning, the Beaver Lake Wah-Pow Detoxification and Treatment Centre for both Aboriginal and non-Aboriginal clients, Heart Lake First Nations social services, and the Lac La Biche Canadian Native Friendship Centre.

1.4.6.6 Municipal Infrastructure

Lac La Biche. Lac La Biche County has been focusing on upgrading and optimizing infrastructure for some years (pre-amalgamation) beginning with the water treatment plant and pipeline connection along the lake shore to Plamondon, east of Lac La Biche, and an extension west of Lac La Biche. This water plant is designed to service 8,000 people and is at 50% capacity (Kolenosky 2011, pers. comm.). Approximately 40% of treated water is sold to industry. At current building rates, the County anticipates upgrading this plant in three to five years.

Upgrades to the wastewater treatment facility are anticipated to be in place in January 2013, and include upgrades to the plant, lift station and road and a tie in to the south of Lac La Biche, for a budgeted cost of \$24 million (Kolenosky, 2001, pers. comm.).

The County is initiating a new municipal development plan expected to be completed in spring 2012. There are 48 approved subdivisions within the Hamlet and the adjacent County which include housing lots, industrial sites and proposed retail complexes.

Upgrades were made to the Lac La Biche airport building and apron in 2010. Canadian National Railway (CN) operates the rail line that runs through Lac La Biche from Edmonton to Fort McMurray. A feasibility study is underway to assess moving the railway switching yards from their location in the Hamlet to a location southeast of the Hamlet, which would allow the County to optimize the use of lands and increase the access between portions of the Hamlet currently separated by the railway. Lac La Biche County developed a plan for a regional landfill with a 50-year life span to replace six existing smaller landfills. The new facility is in the final approval stages with Alberta Environment and Water.

The County maintains 950 km of rural roads and the Hamlet of Lac La Biche has 25 km of paved roads. Most of the County roads are in the south end of the County. Alberta Transportation is responsible for several highways running through the County and the Hamlet of Lac La Biche. Most roads developed in the north end of the County by oil sands producers and forestry companies are private roads, maintained by the companies themselves. Discussions with industry on road maintenance are important to the County, to ensure they can meet funding expectations. Although industry roads may be privately funded, access is not limited on those roads as they pass through public lands.

1.4.6.7 Recreation

Recreational infrastructure is primarily located the Hamlet of Lac La Biche but serve the wider population than just the Hamlet. In January, 2011, the County opened the Bold Centre, a recreational multiplex located in the Hamlet of Lac La Biche. The Bold Centre includes two arenas, two field houses, four-lane curling rink, library, community hall, running track and a fitness centre. The County is initiating a parks and open space master plan to be complete in the next two years, including planning for a community trail system and upgrades of the marina and dock area (Coleman 2011, pers. comm.). The community has a wide range of clubs, associations and facilities including (Lac La Biche Region 2011, internet site):

- Community halls;
- Hockey and curling rinks;

- Senior and recreation centres;
- Ball diamonds and soccer fields;
- Indoor aquatics centre, racquet ball courts and climbing wall;
- Fitness facilities;
- 18-hole golf course and driving range;
- Bowling alley;
- Movie theatre;
- Paved walking trails;
- Hiking and biking trails;
- Canoe circuit; and
- All-terrain vehicle (ATV) and off-road trails.

Every year in August, the community hosts Lac La Biche Pow Wow days, which is a community fair, fishing derby and celebration.

1.4.7 Beaver Lake Cree Nation #131 Reserve

Between 2002 and 2010, the population of Beaver Lake Cree Nation increased by approximately 34% from 310 to 415 (Table 1; Alberta Municipal Affairs 2011). The population of Beaver Lake Cree Nation changed due to natural population growth and inflow/outflow of population in pursuit of economic opportunities (Encana 2009). As of August 2011, approximately 35% of Beaver Lake Cree Nation band members live on reserve (INAC 2011b).

1.4.7.1 Education

Amisk Community School is a federally funded kindergarten to grade 9 school located on Beaver Lake First Nation Reserve #131. Enrolment has been growing in recent years. About half of the students are from the reserve while the others come primarily from Lac La Biche (Encana 2009). The school attracts students from off the reserve because class sizes at Amisk Community School are much smaller than those in Lac La Biche, with 20 and 30 students per class, respectively (Encana 2009). Since there is no high school on the reserve, students from Beaver Lake IR 131 attend high school in Lac La Biche. Instead of a principal or vice-principal, Amisk Community School (ACS) is led by a nine member management team and the tasks of school administration are distributed amongst the nine team members and are supervised by the Band Council (Beaver Lake 2011, internet site).

Post-secondary education services are provided by Portage College in Lac La Biche and Blue Quills College. Blue Quills College is a locally controlled Indigenous education centre focussing on maintaining and enhancing culture and has direct relationships with other universities and colleges in Alberta. It is governed by seven appointed board members from the seven local First Nations communities, including Beaver Lake and Heart Lake. Programs cover a variety of subjects with a focus on Cree language, trades training, pre-employment training, literacy programs, academic upgrading, university transfer and other adult learning courses.

1.4.7.2 Medical Facilities and Services

Beaver Lake Health Centre provides community health services Monday to Friday and is staffed with a Registered Nurse and two full-time community health representatives (Lac La Biche 2010). Programs provided at the centre include immunization, communicable disease, community awareness, crisis intervention, and maternal and child health. The centre contains health education resources, brighter futures program, positive Indian parenting program, home care and Headstart programs/daycare, community wellness, and National Native Alcohol Drug Program (Lac La Biche 2010). Emergency services are available in Lac La Biche.

1.4.7.3 Social Services

Beaver Lake Wah-Pow Detox Centre is located on Beaver Lake Cree Nation Reserve and has a bed capacity of 25, and both male and female accommodations. It is a treatment facility for people struggling with drug and alcohol problems (Lac La Biche 2010).

1.4.7.4 Protective Services

Policing services in Beaver Lake are provided by the Lac La Biche Detachment of the RCMP.

1.4.7.5 Recreation

Beaver Lake has a campground with a beach and fishing access. Other recreational activities include the Beaver Lake Pow-Wow and Kikino Rodeo.

1.4.8 Heart Lake First Nation

The Heart Lake First Nation has two reserves (167 and 167A) with the majority of the population living on #167 reserve. The population on the Heart Lake First

Nation #167 reserve has remained relatively stable from 2002 to 2010 with an increase in from 186 to 194 (Table 1). As of August 2011, approximately 60% of registered members of the Heart Lake First Nation are living on reserve (INAC 2011).

1.4.8.1 Education

Kohls School is a federally funded school located on the Heart Lake First Nation reserve that provides kindergarten to grade 6 education. Students from Heart Lake attending grades 7 to 12 are bussed to Lac La Biche to attend high school. Post-secondary education services are provided by Portage College in Lac La Biche and Blue Quills College (co-operated with Beaver Lake Cree First Nation as describe above in 1.4.7.1). Programs at both colleges have a focus on trades, academic upgrading and other adult learning courses.

1.4.8.2 Medical Facilities and Services

Heart Lake Health Centre is open Monday to Friday and has a 24-hour emergency on-call nurse. Public health services at the centre include home visitation, palliative care, newborn home visits, pre-natal services, general health inquiries, mental health program, alcohol and drug abuse counselling, assault and abuse programs, and fetal alcohol program (Lac La Biche 2010).

1.4.8.3 Social Services

Heart Lake First Nation provides social services to reserve residents including programs for youth and seniors (Lac La Biche 2010).

1.4.8.4 Recreation

Recreational activities at Heart Lake include Heart Lake Treaty Days and the Heart Lake Pow Wow.

1.5 REGIONAL TRAFFIC AND ROADS

Access to the south end of the RSA is via Highway 55 from Cold Lake to Lac La Biche, then Secondary Highway 881 north to Conklin. Access from the north is via Highway 63 connecting to Secondary Highway 881. Construction traffic for recent developments has largely travelled south from the Highways 63 and 881 junction, as this route is a high-load corridor. Until overhead lines are buried on the southern portion of Secondary Highway 881, all oversize and high loads must come south on Secondary Highway 881 from Highway 63, or by rail.

Traffic on Highway 63 has been identified as a concern by residents of Fort McMurray. All construction and operations traffic to the mines and facilities north of Fort McMurray uses Highway 63. The concerns of the communities include:

- volume of traffic, especially at peak commuting times;
- speed of traffic on the highway; and
- construction-related staging traffic to avoid peak times.

Alberta Transportation has proposed a number of major projects for Highway 63 between 2011 to 2014 including interchanges, preservation/overlay and twinning at multiple sections along the highway and the construction of the new Athabasca River Bridge and interchanges north of Fort McMurray (Alberta Transportation 2011a).

The Average Annual Daily Traffic (AADT) counts along Highway 63 between 2005 and 2010 show the volume of traffic increasing during the time frame with the exception of a small decrease in traffic volumes in 2009 (Table 20).

Table 20 Average Annual Daily Traffic Counts on Highway 63 between 2005 and 2010

Locations	Average Annual Daily Traffic Counts (AADT)					
	2005	2006	2007	2008	2009	2010
4 km north of Wandering River	3,100	3,240	3,500	3,630	3,450	3,870
North of Highway 881 northwest of Anzac	5,220	6,750	7,640	7,600	6,600	6,890
North of MacKenzie Boulevard, Fort McMurray	17,460	19,340	21,870	22,510	21,260	21,920
North of Gregoire/Beacon Drive, Fort McMurray	31,560	34,220	37,510	38,620	36,760	37,900
North of Morrison Street, Fort McMurray	44,260	45,740	49,830	53,330	52,010	55,350
North of Thickwood Boulevard, Fort McMurray	26,430	27,110	29,770	32,860	31,660	33,790
North of Confederation Way, Fort McMurray	15,730	16,070	20,350	23,070	21,880	23,620
North of AOSTRA Road	13,100	13,930	16,870	19,390	18,130	20,330
South of Fort McKay	4,040	4,910	6,260	7,200	8,440	9,120

Source: Alberta Transportation 2011b.

The Highway 55 bypass around Lac La Biche was completed in 2006 to alleviate traffic along the main street of the Hamlet as it travels to Secondary Highway 881. Some truck traffic still uses the direct route through the Hamlet. Traffic on Secondary Highway 881 has been identified as a concern by residents of the rural communities including Conklin, Janvier, Anzac, Gregoire Lake Estates, FMFN at Gregoire Lake, the CPDFN at Janvier, and Lac La Biche, resulting from an increase in large tractor-trailer loads and traffic due to

construction of projects accessed from Secondary Highway 881. The concerns of the communities include:

- volume of traffic, especially at peak commuting times;
- speed of all traffic through the communities;
- potential for collision where driveways enter directly onto the highway at Fort McMurray No. 468 First Nation #176 and 176A reserves and Gregoire Lake Estates;
- traffic in and around the Hamlet of Lac La Biche
- safety of children being bussed to school;
- highway maintenance including line painting and plowing;
- dust; and
- optimizing business opportunities adjacent to Highway 881.

The AADT counts along Secondary Highway 881 between 2005 and 2010 are shown in [Table 21](#). The traffic volume increase is associated with construction phases of several in situ developments. Until 2006, tractor-trailer traffic used only the portion of Secondary Highway 881 north of Janvier. Once paving of Highway 881 was complete in 2006, traffic past Conklin and Janvier increased. Increasing traffic east of Sir Winston Churchill Park is associated with the complete paving of Secondary Highway 881 and the truck bypass around Lac La Biche. Since 2007 traffic volumes have generally been declining along Secondary Highway 881, with the exception of the communities of Janvier, Conklin and Lac La Biche which show a steady increase in traffic volumes.

Table 21 Average Annual Daily Traffic Counts on Secondary Highway 881 between 2005 and 2010

Average Annual Daily Traffic Counts (AADT)	Average Annual Daily Traffic Counts (AADT)					
	2005	2006	2007	2008	2009	2010
Highway 63 and Secondary Highway 881 Junction	3,400	4,350	4,170	3,810	3,130	3,180
West of Anzac Turnoff	2,830	3,790	3,840	3,520	2,740	2,800
East of Anzac Turnoff	2,340	3,030	3,080	2,820	2,200	2,240
North of Long Lake Project	2,280	2,960	3,020	2,760	2,160	2,200
South of Long Lake Project	990	1,290	1,310	1,270	1,030	1,050
North of Surmont Project	960	1,260	1,280	1,240	1,000	1,020
South of Surmont Project	510	720	720	720	600	600
North of Janvier	390	710	820	820	840	860
South of Janvier	360	640	750	750	770	790
North of Conklin	270	720	800	880	900	920
South of Conklin	240	630	840	930	960	1,000
16.5 km North of Highways 858 and 881 Imperial Mills	560	880	1,070	1,350	1,370	1,520
East of Beaverhill Road in Lac La Biche	2,490	2,490	2,650	n/a	2,790	2,810
West of Beaverhill Road in Lac La Biche	6,170	6,550	6,890	n/a	6,910	7,100
At Lac La Biche Corner, East of Highways 36 and 55	8,940	9,400	9,870	10,220	9,910	7,590

n/a – not available.

Source*Produced by CornerStone Solutions Inc. on February 22, 2011, and posted on Alberta Transportation website (Alberta Transportation 2011).

Alberta Transportation has nothing listed for Secondary Highway 881 in the Major Provincial Highway Projects from 2011 to 2014 (Alberta Transportation 2011a). CRISP identifies upgrades to Highway 881 south of Conklin during the 2011 to 2014 Phase 1, to allow overdimensional loads to travel south of Conklin.

Oil sands producers in the area around Anzac, Fort McMurray First Nation #176 and 176 A reserves and Gregoire Lake Estates have developed several strategies to deal with the volume of heavy traffic on the north end of Secondary Highway 881. These strategies include:

- support of the Willow Lake Traffic Advisory Group, to discuss and act on concerns;
- staging of heavy and dimensional loads between midnight and 6 am;
- flying some construction and operations workers to the existing project sites; and
- employee awareness sessions.

1.5.1.1 Traffic Collisions and Collision Rates

Detailed statistics on traffic collisions, collision severity and rates between 2004 and 2008 are provided in [Tables 22-24](#). Collision rates per 100 million vehicle kilometres have decreased overall from 2004 to 2008, whereas collision rates on provincial highways has increased in the same time period ([Table 22](#)). The collision severity data by community shows that total collisions have increased overall in each of the communities, with Lac La Biche seeing the highest number of collisions ([Tables 23-24](#)).

Table 22 Collision Rates, 2004s to 2008

Year	Collision Rates per 100 million vehicle kilometres	
	Highway 881 (Lac La Biche to Junction 63)	Provincial Highways (rural 2-lane undivided numbered 500 to 999)
2004	204.4	130.8
2005	156.5	133.6
2006	172.8	154.3
2007	188	150.5
2008	161.3	146.7

Source: Cenovus 2010.

Table 23 Highway 881 Collision Severity by Community and Year, 2004 to 2009

Collision Severity	2004	2005	2006	2007	2008	2009	Total
Lac La Biche County							
Fatal Collisions	0	0	1	0	2	0	3
# Killed	0	0	1	0	2	0	3
# Injured	0	0	0	0	5	0	5
Injury Collisions	13	12	5	15	13	9	67
# Injured	22	21	7	19	22	13	104
Property Damage Collisions	61	54	85	95	81	68	444
Total Collisions	74	66	91	110	96	88	525
Total Killed	0	0	1	0	2	0	3
Total Injured	22	21	7	19	27	13	109
Conklin							
Fatal Collisions	0	0	2	0	0	0	2
# Killed	0	0	2	0	0	0	2
# Injured	0	0	1	0	0	0	1
Injury Collisions	0	2	5	1	6	5	19
# Injured	0	2	5	1	8	5	21
Property Damage Collisions	7	10	21	24	23	20	105
Total Collisions	7	12	28	25	29	25	126
Total Killed	0	0	2	0	0	0	2
Total Injured	0	2	6	1	8	5	22
Janvier							
Fatal Collisions	0	0	0	1	1	0	2
# Killed	0	0	0	1	1	0	2
# Injured	0	0	0	0	1	0	1
Injury Collisions	0	0	3	2	3	5	18
# Injured	0	0	4	2	5	8	19
Property Damage Collisions	2	3	3	13	12	4	37
Total Collisions	2	3	6	16	16	9	52
Total Killed	0	0	0	1	1	0	2
Total Injured	0	0	4	2	6	8	20

Source: Cenovus 2010 and Lacanilao 2011.

Table 24 Highway 881 Collision Severity by Community, 2004 to 2009

Collision Severity	Collisions (#, %), Injuries (I) and Fatalities (F)															
	Lac La Biche County				Conklin				Janvier				Total			
	#	%	I	F	#	%	I	F	#	%	I	F	#	%	I	F
fatal	3	0.6	5	3	2	1.6	1	2	2	3.8	1	2	7	1.0	7	7
injury	67	13.0	102	0	19	15.1	21	0	13	25.0	19	0	99	14.3	144	0
damage	444	84.4	0	0	105	83.3	0	0	37	71.2	0	0	586	84.7	0	0
Total	525	100.0	109	3	126	100.0	22	2	52	100.0	20	2	692	100.0	151	7

Source: Cenovus 2010 and Lacanilao 2011.

1.6 REFERENCES

- Aboriginal Affairs and Northern Development Canada (AANDC; formerly Indian and Northern Affairs Canada [INAC]). 2011. Internet Site. *Community Profiles*. Available at: <http://pse5-esd5.ainc-inac.gc.ca/fnp/Main/Search/SearchFN.aspx?lang=eng>.
- Alberta Transportation. 2011. *Alberta Highways 1 to 986 Traffic Volume History 2001 – 2010*. Available at: <http://www.transportation.alberta.ca/Content/docType181/production/HTVH2001-2010.pdf>.
- Alberta Auditor General. 2005. *Report of the Auditor General of Alberta social Housing Corporation – Land Sales Systems*. http://www.oag.ab.ca/?V_DOC_ID=869.
- Alberta Emergency Management Agency. 2011. *Alberta Emergency Management Agency*. Accessed 2011. <http://aema.alberta.ca/>.
- Alberta Employment and Immigration. 2008. *Alberta Labor Force Statistics, July 2008*. Available at: http://employment.alberta.ca/documents/LMI/LMI_LFS_0708_public_package.pdf.
- Alberta Employment and Immigration. 2011. *Alberta Labour Force Statistics, June, 2011*. Available at: <http://employment.alberta.ca/documents/LFS-June11-package.pdf>.
- Alberta Environment (AENV). 2011. *Guide to Preparing Environmental Impact Assessment Reports in Alberta - Updated February 2011*. Alberta Environment, Environmental Assessment Team, Edmonton, Alberta.
- Alberta Health Services. 2010. internet site. *Northern Lights Regional Health Centre*. <http://www.albertahealthservices.ca/2344.asp>.
- Alberta Health Services. 2011a. internet site. *New program helps residents overcome addiction issues*. <http://www.albertahealthservices.ca/4056.asp>.
- Alberta Health Services. 2011b. internet site. *AHS seeks input for initiative to improve health of homeless*. <http://www.albertahealthservices.ca/5199.asp>.

Alberta Housing and Urban Affairs. 2011. *Core Need Income Thresholds (CNIT)*. Available at: <http://www.housing.alberta.ca/documents/cnit2011.pdf>.

Alberta Infrastructure. 2011. *Schools*. Available at: <http://www.infrastructure.alberta.ca/516.htm>.

Alberta Human Services. 2011. Internet site. Available at: <http://www.child.alberta.ca/home/822.cfm>

Alberta Municipal Affairs. 2008. Accessed 2008. <http://www.municipalaffairs.alberta.ca/>.

Alberta Municipal Affairs. 2011. Accessed 2011. <http://www.municipalaffairs.alberta.ca/>.

Alberta Transportation. 2011a. *2011-2014 Tentative Major Construction Projects 2011/12-2013/14*. Available at: <http://www.transportation.alberta.ca/Content/docType181/production/Provincial%20Highways%202011-2014.pdf>.

Alberta Transportation. 2011b. *Alberta Highways 1 to 986 Traffic Volume History 1998 – 2007*. Program Management Branch, Highway Asset Management Section. February 2008. Produced by CornerStone Solutions Inc. on February 18, 2009. Available at: <http://www.transportation.alberta.ca/3459.htm>.

Athabasca Tribal Council (ATC). 2009. Accessed 2009. <http://www.atc97.org/>.

ATC. 2011. Accessed 2011. <http://atc97.org/first-nations/fort-mcmurray-no-468-first-nation>.

Beaver Lake. 2011. Accessed 2011. <http://www.beaverlakecreation.ca/>.

Bonnyville Nouvelle. 2011. Accessed 2011. *Air Weapons Range to become improvement district under proposed deal*. <http://www.bonnyvillenouvelle.ca/article/20110816/BNV0801/308169977/-1/bnv/air-weapons-range-to-become-improvement-district-under-proposed-deal>.

Cenovus Energy (Cenovus). 2010. *Application for Approval of the Narrows Lake Project*. Submitted to the Alberta Energy Resources Conservation Board and Alberta Environment. June 29, 2010.

Cenovus Energy. 2011. *Christina Lake Page*. Accessed 2011. <http://www.cenovus.com/operations/oil/christina-lake.html>.

Canadian Mortgage and Housing Corporation (CMHC). 2011. *Rental Market Report: Alberta Highlights*. Spring 2011. Available at: <https://www03.cmhc-schl.gc.ca/catalog/productDetail.cfm?lang=en&cat=59&itm=17&fr=1312483822549>.

Community Futures. 2011. *Community Profile-Investment Attraction*. July 2011.

EnCana FCCL Ltd. (EnCana). 2009. *Application for Approval of the Christina Lake Thermal Expansion Project Phase 1E, 1F and 1G*. Submitted to the Alberta Energy Resources Conservation Board and Alberta Environment. October 2009.

Fort McMurray Catholic School Division (FMCS D). 2011. Internet site. Available at: <http://fmcschools.ca/>.

Fort McMurray Family Crisis Society (FMMFCS). 2011. Internet site. Available at: <http://www.fmmfcs.com/>.

Fort McMurray Public School Division (FMPSD). 2011. Internet site. Available at: <http://fortmcmurraypsd.sharpschool.com/cms/One.aspx>.

Fort McMurray – Alberta. 2007. *Labour Market Information*. Accessed 2011. <http://www.woodbuffalo.net/>.

Fort McMurray – Alberta. 2008. *Labour Market Information*. Accessed 2011. <http://www.woodbuffalo.net/AboutCostHouse.html>

Fort McMurray – Alberta. 2009. *Labour Market Information*. Accessed 2011. <http://www.woodbuffalo.net/AboutCostHouse.html>.

Fort McMurray – Alberta. 2011. *Labour Market Information*. Accessed 2011. <http://www.woodbuffalo.net/AboutCostHouse.html>.

Fort McMurray Today. 2011a. *Council against municipal boundary change*. Available at:
<http://www.fortmcmurraytoday.com/ArticleDisplay.aspx?e=3212173>.

Fort McMurray Today. 2011b. *Public school board makes new Timberlea schools a priority*. Available at:
<http://www.fortmcmurraytoday.com/ArticleDisplay.aspx?e=3075476>.

Fort McMurray Today. 2011c. *Conklin makes alliance with Cenovus Energy*. Available at:
<http://www.fortmcmurraytoday.com/ArticleDisplay.aspx?e=3073153>.

Government of Alberta. 2007a. *Oil Sands Consultations: Aboriginal Consultation Final Report* Available at:
http://www.energy.alberta.ca/OilSands/pdfs/AboriginalCon2007_MSC_OS.pdf.

Government of Alberta. 2007b. *Oil Sands Consultations: Multi-Stakeholder Committee Final Report*. Available at:
http://www.energy.alberta.ca/OilSands/pdfs/FinalReport_2007_OS_MSC.pdf.

Government of Alberta. 2008. *Alberta's Oil Sands. Resourceful. Responsible*. Available at: <http://environment.gov.ab.ca/info/library/7925.pdf>.

Government of Alberta. 2009. *Responsible Actions, A Plan for Alberta's Oil Sands*. Available at:
http://www.treasuryboard.alberta.ca/docs/GOA_ResponsibleActions_web.pdf.

Government of Alberta. 2011a. Internet site *Treasury Board comprehensive Regional Infrastructure Sustainability Plan*. Available at:
<http://treasuryboard.alberta.ca/1211.cfm>.

Government of Alberta. 2011b. *Comprehensive Regional Infrastructure Plan for the Athabasca Oil Sands Area*. Government of Alberta. May 2011. Available at:
http://treasuryboard.alberta.ca/docs/AOSA_CRISP_Final.pdf.

Globe and Mail. 2011. *Fort McMurray: the heart of the oil patch seeks its soul*. Published October 25, 2011. Available at: <http://m.theglobeandmail.com/report-on-business/industry-news/energy-and-resources/fort-mcmurray-the-heart-of-the-oil-patch-seeks-its-soul/article2212154/?service=mobile>

Government of Alberta. 2011c. *News Release*. Available at: <http://alberta.ca/home/NewsFrame.cfm?ReleaseID=/acn/201101/29784856B6B6D-C531-73BA-D9189180F72A40BE.html>.

Gregory. 1999. *Lac La Biche Chronicles: The Early Years*. Lac La Biche, Alberta.

Ho, Sharron. 2011. *County loses bombing range, keeps funding*. Lac La Biche Post, September 13, 2011.

Housing and Urban Affairs. 2011. Available at: <http://housing.alberta.ca/documents/2010-Weighted-Average-Rent-and-Rental-Range-by-Type-of-Rental-Unit.pdf> and <http://housing.alberta.ca/documents/2010-Number-of-Vacancies-and-Vacancy-Rates-by-Type-of-Unit.pdf>.

Indian and Northern Affairs Canada (INAC). 2011a. Accessed 2011. <http://www.ainc-inac.gc.ca/ih/index-eng.asp>.

INAC. 2011b. *First Nations Profiles*. Accessed 2011. <http://pse5-esd5.ainc-inac.gc.ca/fnp/Main/Index.aspx?lang=eng>.

Keyano College. 2010. *Keyano College Annual Report 2009/2010*. Available at: [http://66.38.159.213/Media/Collections/Board_of_Governors/Keyano.AnnualReport\(2010\).pdf](http://66.38.159.213/Media/Collections/Board_of_Governors/Keyano.AnnualReport(2010).pdf).

Keyano College. 2011. Accessed 2011. <http://www.keyano.ca/>.

Lacanilao, R. 2011. *Office of Traffic Safety, Alberta Transportation*. September 20, 2011.

Lac La Biche County. 2010. *Community Service Directory 2010/2011*. Published by Lac La Biche County and Lac Lac Biche County FCSS. Available at: http://www.laclabicheregion.com/index.php?option=com_content&view=article&id=49&Itemid=65.

- Lac La Biche County. 2011a. Accessed 2011.
http://www.laclabichedcounty.com/files/labiche/in_touch_2011_spring_online.pdf.
- Lac La Biche County. 2011b. Accessed 2011.
http://laclabicheregion.com/index.php?option=com_content&view=article&id=43&Itemid=58.
- Lac La Biche Region. 2011c. Accessed 2011.
http://www.laclabicheregion.com/index.php?option=com_content&view=article&id=52&Itemid=264.
- Lac La Biche Region. 2011d. Accessed 2011.
http://laclabicheregion.com/index.php?option=com_content&view=article&id=54&Itemid=266
- Lac La Biche Region Industry Consultation Committee (LLBRICC). 2007. Submission to Government of Alberta Oil Sands Multi-stakeholder Committee, Consultation Panel Phase II. April 10, 2007.
- Multiple Listing Services. 2011. Accessed December 7, 2011. www.mls.ca.
- Northland School Division No. 61. 2011. Accessed 2011.
<http://www.northland61.ab.ca/>.
- Oil Sands Developers Group (OSDG). 2011. *OSDG 2011 Survey Results*. May 2011. Available at: <http://www.oilsandsdevelopers.ca/wp-content/uploads/2011/06/OSDG-2011-Survey-Results.pdf>.
- Oil Sands Leadership Initiative (OSLI). 2011. Accessed August 2011.
<http://www.osli.ca/projects/janvier-chard-initiative>.
- Portage College. 2011. Accessed 2011. <http://www.portagec.ab.ca/>.
- Radke, D. Flett, J., Lyster, L. and G. Haynes. 2006. *Investing in our Future: Responding to the Rapid Growth of Oil Sands Development, Final Report*. December 29, 2006. Accessed November 2009. Available at:
<http://www.assembly.ab.ca/lao/library/egovdocs/2006/alec/158408.pdf>.

- Regional Municipality of Wood Buffalo (RMWB). 2000. *Municipal Development Plan Bylaw 00/005*. Available at: <http://www.woodbuffalo.ab.ca/Assets/Departments/Planning+and+Development/Long+Range+Planning/Municipal+Development+Plan/Municipal+Development+Plan.pdf>.
- RMWB. 2008a. *Envision Wood Buffalo: Towards 250K. Gregoire Lake Estates: Where We Are Today. May 2008*. Available at: http://www.woodbuffalo.ab.ca/Assets/Departments/Planning+and+Development/Long+Range+Planning/Envision+Wood+Buffalo/PDF/background_report_gregoirelake.pdf.
- RMWB. 2008b. *Envision Wood Buffalo: Towards 250K. Anzac: Where We Are Today. May 2008*. Available at: http://www.woodbuffalo.ab.ca/Assets/Departments/Planning+and+Development/Long+Range+Planning/Envision+Wood+Buffalo/PDF/background_report_anzac.pdf.
- RMWB. 2009. *Regional Municipality of Wood Buffalo Land Use Bylaw*. Consolidated as of March 24, 2009.
- RMWB. 2010a. *Planning and Development Department, 2010 Municipal Census*. Available at: <http://www.woodbuffalo.ab.ca/Assets/Corporate/Census+Reports/2010+Municipal+Census.pdf>.
- RMWB. 2010b. *Rural Service Delivery Review. March 2010*. Available at: http://www.woodbuffalo.ab.ca/Assets/Departments/Stakeholder+Relations/pdf/rural_service_delivery_review.pdf.
- RMWB. 2010c. *Envision Wood Buffalo Plan. March 2010*. Available at: http://woodbuffalo.ironpointv7.net/Assets/Departments/Planning+and+Development/Long+Range+Planning/Envision+Wood+Buffalo/PDF/envision_wood_buffalo_plan.pdf.
- RMWB. 2010d. *Commercial and Industrial Land Use Study. January 2010*. Available at: <http://www.woodbuffalo.ab.ca/Assets/Departments/Planning+and+Development/pdf/CILUS.pdf>.

- RMWB. 2010e. *Submission of Intervention of Regional Municipality of Wood Buffalo*. Submitted to Joint Review Hearing of Application No. 1445535 Joslyn North Mine Project Total E&P Joslyn Ltd. Submitted August 24, 2010. Available at:
http://www.ceaa.gc.ca/050/documents_staticpost/cearef_37519/44816/submission.pdf <http://www.ceaa.gc.ca/050/documents/45452/45452E.pdf>.
- RMWB. 2010f. *2010/2011 Tough Times Handbook*. Available at:
http://www.woodbuffalo.ab.ca/Assets/00assets/living/social+support+services/pdfs/Tough_Times_Handbook.pdf.
- RMWB. 2011a. *Municipal Development Plan*. Available at:
<http://www.woodbuffalo.ab.ca/page1423.aspx>
- RMWB. 2011b. Media Release. *Province to release 20-year land supply to Wood Buffalo for urban development*. Available at:
<http://www.woodbuffalo.ab.ca/Page11.aspx?SourceId=2&ArticleId=2986>
- RMWB. 2011c. *Emergency and Protective Services: RCMP*.
http://www.woodbuffalo.ab.ca/living_2227/Emergency-and-Protective-Services/RCMP.htm.
- RMWB. 2011d. *Media Releases. Major Crime Decreases in Wood Buffalo in 2009*. Available at:
http://www.woodbuffalo.ab.ca/News-Room/Media-Releases/Major-crime-decreases-in-Wood-Buffalo-in-2009_s2_p870.htm.
- RMWB. 2011e. *Emergency and Protective Services: RCMP - Wood Buffalo Detachment*. Accessed 2011.
http://www.woodbuffalo.ab.ca/living_2227/Emergency-and-Protective-Services/RCMP/Wood-Buffalo-Detachment.htm.
- RMWB. 2011f. *2011 Budget*.
<http://www.woodbuffalo.ab.ca/Assets/Departments/Financial+Services/pdf/2011+Municipal+Budget.pdf>.
- RMWB. 2011g. *Capital Plan*. http://www.woodbuffalo.ab.ca/Municipal-Government_2230/Capital-Plan.htm.
- RMWB. 2011h. *Parks and Trails: Birchwood Trails*.
http://www.woodbuffalo.ab.ca/living_2227/Parks-and-Trails/Birchwood-Trails.htm.

Statistics Canada. 2001. 2001 *Census Community Profiles*.
<http://www12.statcan.ca/english/census01/home/Index.cfm>.

Statistics Canada. 2006a. *2006 Census Community Profiles, March 13, 2007*.
Statistics Canada Catalogue No. 92-591-XWE. Ottawa, Ontario. Available
at [http://www12.statcan.ca/english/census06/data/profiles/
community/Index.cfm?Lang=E](http://www12.statcan.ca/english/census06/data/profiles/community/Index.cfm?Lang=E).

Statistics Canada. 2006b. *2006 Aboriginal Population Profile*. Catalogue No.
92-594-XWE. Ottawa, Ontario. Available at
[http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/prof/92-
594/index.cfm?Lang=E](http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/prof/92-594/index.cfm?Lang=E).

United Way. 2011. Available at: [http://fmunitedway.com/united-way-fort-mcmurray-
campaign.aspx](http://fmunitedway.com/united-way-fort-mcmurray-campaign.aspx).

Urban Systems. 2006. *DRAFT Lakeland County: Planning Baseline Report*.
Edmonton, Alberta. April 2006.

Wood Buffalo Housing and Development Corporation (WBHADC). 2011. Accessed
2011. <http://www.wbhadc.ca/>.

Wood Buffalo Big Spirit. 2011.
http://bigspirit.ca/giving_back/big_spirit_is_a_way_of_life.

Wood's Homes. 2011. Internet site.
<http://www.woodshomes.ca/index.php?page=fort-mcmurray>.

1.6.1 Personal Communication

Bettin, D. 2011. Alberta Health Services, Addictions and Mental Health.
August 2011.

Bradley, A. 2011. Alberta Health Services. Northern Lights Health Centre.
September 2011.

Bunjay, K. 2011. Salvation Army. September 2011.

Coleman, D. 2011. Chief Administrative Office of Lac a Biche County. June 2011.

Dechaine, C. 2011. Real Estate Agent in Lac La Biche. August 2011.

Evans, B. 2011. Conklin Resource Development Advisory Committee. June 2011.

Friesen, B. 2009. Northern Lights Health Centre. May 2009.

- Grandinson, A. 2011. Real Estate Agent in Fort McMurray. June 2011.
- Kallal, A. 2009. Fort McMurray Public School Division, Fort McMurray. March 2009.
- Kearns, M. 2007. CPDFN. Personal Communication, May 2007.
- Keough. 2011. President of Portage College. June 2011.
- Kolenosky. 2011. Lac La Biche County. June 2011.
- Jenkins, K. 2011. Superintendent of the Fort McMurray Catholic School Board of Education. June 2011.
- Moehrle. 2011. Manager of the Lac La Biche Healthcare Centre. June 2011.
- Moghrabi. 2007. Principal of J.A. Williams High School in Lac La Biche. Month 2007.
- Mulhall, J. 2011. Supervisor of Facilities, Parks, Recreation and Culture at the Regional Municipality of Wood Buffalo. June 2011.
- Newton, M. 2011. Manager of Protective Services for Lac La Biche County. August 2011.
- Nokohoo, J. 2007. RMWB Municipal Office, Janvier. March 2007.
- Poltaruk. 2011. Family and Community Support Services Lac La Biche. June 2011.
- Pritchett, S. 2009. Salvation Army, Fort McMurray. March 2009.
- Robertson, J. 2011. Wood Buffalo Housing and Development Corporation. August 2011.
- Shannon, D. 2011. United Way Fort McMurray. August 2011.
- Theberge, C. 2009. Regional Municipality of Wood Buffalo. April 2009.

1.7 ABBREVIATIONS

%	Percent
AADT	Average Annual Daily Traffic
ACS	Amisk Community School
AENV	Alberta Environment
AHS	Alberta Health Services
AI-Pac	Alberta-Pacific Forest Industries
AOSA	Athabasca Oil Sands Area
ASRD	Alberta Sustainable Resource Development
ATC	Athabasca Tribal Council
Canadian Natural	Canadian Natural Resources Ltd.
CNIT	Core Need Income Threshold
CNRL	Canadian Natural Resources Ltd.
CPDFN	Chipewyan Prairie Dené First Nation
CRDAC	Conklin Resource Development Advisory Committee
CRISP	Comprehensive Regional Infrastructure Sustainability Plans
e.g.	for example [Latin <i>exempli gratia</i>]
EIA	Environmental Impact Assessment
EMS	Emergency Medical Services
FCSS	Family and Community Support Services
FLE	Full-Load Equivalent
FMA	Forest Management Agreement
FMCS	Fort McMurray Catholic School Division
FMFN	Fort McMurray #468 First Nation
FMPSD	Fort McMurray Public School Division
i.e.	that is [Latin <i>id est</i>]
km	kilometre
LLBRIC	***
MLS	Multiple Listing Service
NLHC	Northern Lights Health Centre
NLHR	Northern Light Health Region
NNADAP	National Native Alcohol and Drug Abuse Program
OSLI	Oil Sands Leadership Initiative
RCMP	Royal Canadian Mounted Police
RMWB	Regional Municipality of Wood Buffalo
RSA	Regional Study Area
SAGD	Steam Assisted Gravity Drainage
SEIA	Socio-Economic Impact Assessment
STHT	Support Through Housing Team Society
the Project	Kirby Expansion Project
TOR	Terms of Reference
WBHADC	Wood Buffalo Housing And Development Corporation

1.8 GLOSSARY