



**CULTURAL HERITAGE  
ASSESSMENT BASELINE  
Pre-development (1960s) to  
Current (2008)**

**Fort McKay  
Industry Relations Corporation**

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## 1.0 Purpose

The objective of the Fort McKay Specific Cultural Heritage Assessment (CHA Baseline) is to provide an assessment of the cumulative impacts of industrial development on the cultural heritage of Fort McKay. While acknowledging that many factors have influenced the people of Fort McKay since the arrival of the European fur trade 300 years ago, this report will focus on the specific influence of industrial development since it began in the early 1960s. The information contained in this report was generated through extensive literature reviews and conversations with Community members of Fort McKay, who report on (in interviews and through workshops) the cultural shifts that they have experienced in their community that can be linked to industrial development. Information captured in the CHA is intended to be used as a baseline from which the community can assess the impact of future projects on Fort McKay's cultural heritage.

### 1.1 Cultural Heritage Baseline Assessment Report Structure

This CHA Baseline is structured into the following 12 components:

***Section 1 – Purpose***—Outlines the intent behind this document and situates it within the larger structure of the Fort McKay Specific Assessment (FMSA).

***Section 2 – Context: The People of Fort McKay***—Describes the history and cultural context of the Community of Fort McKay. It includes the political influences, such as Treaty 8 negotiations, that have heavily shaped the current situation in Fort McKay. The Legal Context is described in Appendix A.

***Section 3 – Overview of Change: 1960s through 2008***—Provides a summary of the profound shifts – social, environmental, economic, political – Fort McKay has experienced during the last 40 to 50 years.

***Section 4 – Cultural Change and the Land***—Highlights the inextricable linkage between Fort McKay culture and the land. This section discusses the notion that Fort McKay identity is rooted in the land and that environmental changes over the past decades have directly affected their identity and culture.

***Section 5 – Fort McKay Cultural Model***—Describes the process chosen to articulate the changes in Fort McKay Community member's ability to support their values and cultural heritage in the face of the changes discussed in Sections 3.0 and 4.0. Community members were heavily engaged in identifying cultural values, stressors on culture and ways to measure those stressors. A model, validated by the Community, was created to represent the findings and is described in this section.

**Section 6 – Cultural Stressors**—Details the stressors that have affected Fort McKay’s cultural heritage, with an emphasis on industry-related impacts. Drawing on the model from Section 5.0, stressors are grouped into themes which are linked with the associated impacts, their relation to industry and the Community perceptions of those stressors.

**Section 7 – Indicators of Cultural Change**—Discusses the way Fort McKay has chosen to measure the industry stressors. Fort McKay Community members have proposed both qualitative and quantitative measures. This section articulates the process used to select indicators for this assessment, and describes their linkage with indicators from the Environmental Specific Assessment.

**Section 8 – Changes in Culture Stemming from Changes to the Land**—Sections 8 through 10 present the findings from the Community engagement process described in Section 5.0. This Section emphasizes the changes in culture related to Hunting, Trapping, Fishing and Gathering from the 1960’s to 2008.

**Section 9 – Cultural Change and Full Time Wage Employment**—Discusses the cultural changes related to full-time wage employment. Specifically, this section examines wage employment in the 1960’s vis-à-vis wage employment in 2008.

**Section 10 – Changes in Culture Stemming from Changes in Daily Lives**—Emphasizes the changes in culture related to Education, Child-rearing and Visiting from the 1960’s to 2008.

**Section 11 – Significance Assessment and Conclusions**—Takes into consideration qualitative and quantitative information presented in earlier sections of the CHA Baseline to assess the significance of industry development on Fort McKay’s cultural heritage. This section provides summary remarks about the CHA process.

**Section 12 – The Path Forward**—Articulates measures the Community would like implemented to ensure their cultural heritage is retained and supported.

### 1.1.1 Data Sources for Cultural Heritage Assessment Baseline

Fort McKay has derived a large portion of information for its Cultural Heritage Assessment from a project report commissioned specifically for this process entitled ***Indicators of Cultural Change (1960 to 2009): A Framework For Selecting Indicators Based on Cultural Values in Fort McKay (see Appendix B)***. The objective of this project was to develop a list of Fort McKay cultural values, discuss industry stressors affecting Fort McKay culture, develop a list of cultural indicators and facilitate Community validation for each of these tasks. Project researchers gathered information from multiple Community workshops as well as an extensive literature review.

Additional key sources of information for this Cultural Heritage significance assessment include:

- *Fort McKay Specific Environmental Assessment* (Fort McKay Industry Relations Corporation (FMIR); 2010)
- *Fort McKay First Nation Traditional Knowledge Report*. Prepared for the Jackpine Mine Expansion and Pierre River Mine, Environmental Impact Assessment. Prepared at request of Fort McKay Industry Relations Corporation (Shell 2008)
- *Traditional Knowledge and Land Use*. Prepared for the Shell Canada Limited, Jackpine Mine Expansion and Pierre River Mine EIA. Volume 5, Section 8.0 (Shell 2007a)
- *Traditional Land Use Environmental Setting for the Jackpine Mine Expansion & Pierre River Mine Project*. Prepared for Shell Canada Ltd. EIA Appendix 3 (Golder 2007)
- Fort McKay internal reports and studies. Concerns expressed in the CHA Baseline are consistent with information found in these reports. See HEG 2009 (Section 7.0 and Appendix A) for a listing of reviewed reports.

### 1.1.2 Scope and Constraints

The scope of the Cultural Heritage Assessment was by Fort McKay within the following constraints:

- Fort McKay, Shell and Alberta Environment (AENV) agreed that an assessment needed to be completed within the regulatory assessment timeline and prior to any scheduled hearing for the Application. This meant that the assessment needed to be completed in approximately one year.
- No new field studies or data collection or development of additional indicators would be undertaken.

As an innovative pilot project completed in a short timeframe relative to the scope of the project, it is anticipated that the learnings from this project will be used to improve methodology and data sets for future use by regulators, project proponents and Fort McKay. The Cultural Heritage Assessment was particularly challenging to complete within the scope of this pilot project and Fort McKay hopes to build upon and fully develop it in the future.

### 1.1.3 Assessment Scenarios for Cultural Heritage Baseline

This CHA Baseline report considers Fort McKay Cultural Heritage within two timeframes:

- Pre-development Scenario (1960s) – Date selected because this was prior to large-scale oil sands development within Fort McKay Traditional Lands. It should be noted that “1964” was identified as the target pre-development baseline in the Environmental Specific Assessment while the “1960s” was selected for the CHA Baseline. A precise year is necessary for analysis of quantitative environmental data (though the year might vary depending on available data). However, from a cultural standpoint, people often remember experiences comprehensively and forcing an exact pre-development year is an awkward fit. Thus, to accurately reflect Community feedback and perceptions “1960s” was chosen.
- Current Scenario (2008) – This represents the current situation in Fort McKay at the time the CHA Baseline was initiated.

## 1.2 Fort McKay Specific Assessment Structure

This CHA Baseline is one of three components of the Fort McKay Specific Assessment (FMSA):

- A Cultural Heritage Assessment (CHA) Baseline: Pre-development (1964) to Current (2008; the CHA Baseline) – this document
- An assessment of the effects of the Shell projects on cultural heritage (the Project-Specific Cultural Heritage Assessment), which is presented as Attachment 1 to this document.
- An Environmental Assessment (the Environmental Specific Assessment). The Environmental Specific Assessment examines the effects of industrial development on multiple environmental parameters in a manner that is scientifically rigorous and meaningful to the Community.

The overall objective of the FMSA is to give the Community’s assessment of the effects of industrial development on the people of Fort McKay. See the FMSA, [Section 1 – Introduction](#) for a detailed description of the history, structure and composition of the entire FMSA. The documents in the FMSA, their main sections, and key appendices are shown in Figure 1-1.

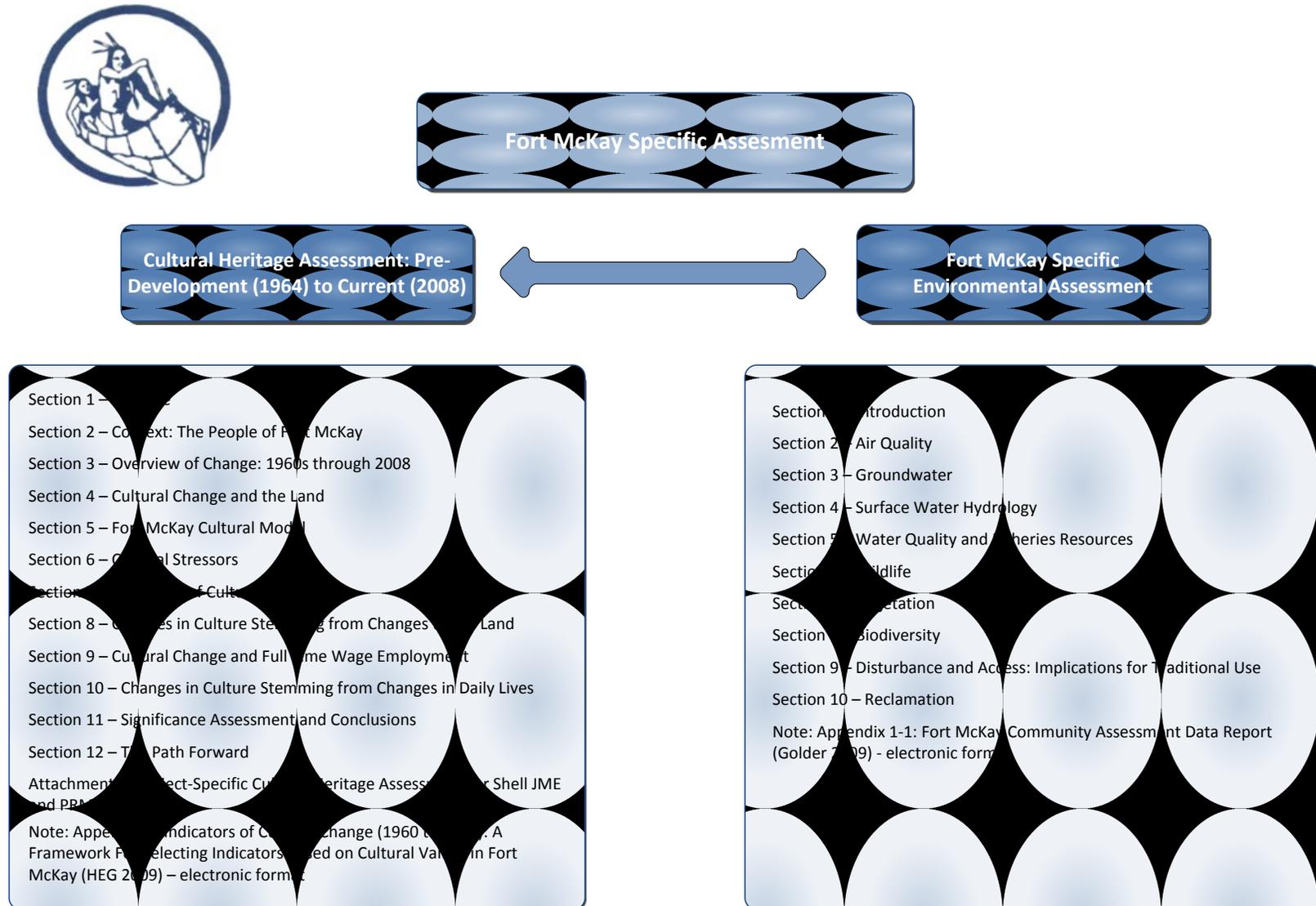


Figure 1-1: Fort McKay Specific Assessment Document Road Map

## 2.0 Context: The People of Fort McKay

*We are people of the land – hunters and gatherers. Without the land we feel lost. Without the land we are nothing.*

(Fort McKay Workshop September 2008)

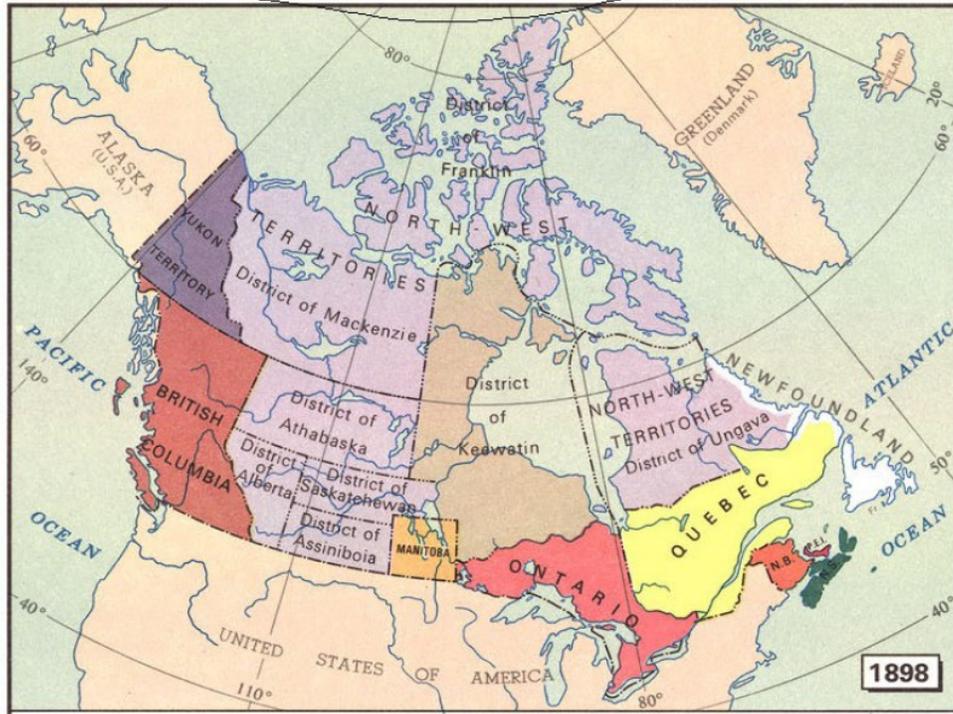
Fort McKay is a community comprised of Cree, Dene and Métis people. Ancestors of the modern day Fort McKay people have lived in the subarctic and boreal forest for approximately 10,000 years. Life and culture depended on a seasonal cycle of trapping, hunting, fishing and gathering foods and medicinal plants such as berries and mosses.

In what became known by the Government of Canada as the Athabasca District (see Figure 2-1), the Chipewyan and Cree lived self-reliant and independent lives (Beaver and Slavey peoples lived in the western part of the District). Their social organization consisted of small groups for hunting and fishing, with limited contact between neighbours (Fumoleau 2004). Annual summer gatherings centred primarily on trading resources, exchanging knowledge of the land and socializing.

Europeans entered these traditional lands in the early 1700s in their search for fur. In 1778, Peter Pond established a fur trading post on the Athabasca River south of present day Fort Chipewyan. In 1820, the Hudson Bay Company established a fur trade post at what is today Fort McKay. Contact between Europeans and the Aboriginal people of the area evolved over the next century. An increasing reliance on the fur economy necessitated closer proximity to furs and fur trading posts. Many people began to settle more permanently in the boreal forests due to the more abundant population of fur animals than in the subarctic (Gillespie 1976).

The economy of the Aboriginal peoples living in proximity to the Fort McKay and Fort Chipewyan posts consisted of hunting, trapping, fishing and gathering and the processing of these harvests into fuel, food, clothing and other materials for household needs. These same activities also generated cash, such as from the sale of furs and fish, which might have been supplemented by occasional or seasonal paid work. “As a whole, this type of economy is subsistence rather than market-oriented and has a distinctive resource and cultural base” (Notzke 1994: 123).

It should be noted, however, that this hunting/trapping lifestyle has an economic value beyond revenue from the sale of furs. As Claudia Notze, associate professor in First Nations Governance at University of Lethbridge, states: “In such subsistence oriented lifestyle, a little income from trapping can go a long way. While living and working on the Trapline, trappers often obtain other wild game as well as fur-bearers for food. The economic importance of meat of fur-bearing animals for human consumption is great among Aboriginal trappers...meat obtained this way is also used as bait and dog food. Fur and leather goods are made for commercial and personal use” (Notzke 1994: 123).



**Figure 2-1: Natural Resources Canada: The Atlas of Canada –  
Maps of Territorial Evolution of Canada (1667 to 1949)**

As will be explained further in this report, the importance of these traditional activities extends beyond strict economic value. “It is the relations among people that hunting and fishing generate, not simply the relations between man and wildlife, which are important to Aboriginal people. Despite the continued northward advance of industrial society, most Aboriginal northerners continue to regard traditional activities as essential to the maintenance of their social structure and institutions, their culture and cohesion of their Community and family lives” (Notzke 1994: 112).

This particular era of interaction between the Aboriginal peoples of the Athabasca District and Europeans was to change in 1896 with the discovery of gold in the Yukon. Prospectors and others travelled through the area to the gold fields. Geological prospects indicated that mineral wealth in the area was staggering. These expectations hastened the Government of Canada’s thinking that it was time to negotiate a treaty with the Aboriginal peoples of the area.

By this time, “the once self-sufficient hunter [had become] more and more dependent on the trading post for essential and non-essential goods. But this transition from a hunting to trapping economy [was] never completed. There still remain[ed] after a century of change, strong indications that whatever their occupation, Indians have never relinquished the characteristics and values of their

hunting life and hunting economy. These values must surely have deeply influenced their thinking and attitude about the treaties” (Fumoleau 2004: 13).

The people of the Fort McKay First Nation entered into Treaty 8 under the leadership of headman Adam Boucher at negotiations held in Fort McMurray in 1899. It is necessary to provide some context to the desires and position of the Aboriginal people as expressed during these treaty negotiations. It is the stance of those that entered into the treaty process that has sustained a legacy of a culture inextricably linked to the land still maintained by the people of Fort McKay today. Observers have written:

*Much stress was laid on one point by the Indians, as follows: They would not sign under any circumstances unless their right to hunt, trap and fish was guaranteed, and it must be understood that these rights they would never surrender*

(James Cornwall as quoted in Fumoleau, 2004: 74)

*Two members of the [Treaty 8] Commission landed here [Fort Chipewyan] at noon [July 13, 1899] and called a meeting of all the Indians for 3pm.... Commissioner McKenna explained the Government’s views and the advantages it offered to the people. The Chief of the Crees spoke up and expressed the conditions on which he would accept the Government’s proposals:*

*Complete freedom to fish*

*Complete freedom to hunt*

*Complete freedom to trap*

*As he and his children are Catholics, he wants their children to be educated in Catholic schools.*

*In turn, the Chipewyan spokesman set the same conditions as the first speaker. The Commissioner acknowledged all the requests which both had voiced.*

(Diary of the Catholic Mission as quoted by Fumoleau, 2004:77)

*Discussions were long enough but sincere; Crees and Chipewyans refused to be treated like prairie Indians and to be parked on reserves ... It was essential to them to retain complete freedom to move around*

(Father Breynat as quoted by Fumoleau, 2004:79)

*These Chipewyans lost no time in flowery oratory, but came at once to business and kept us, myself in particular, on tenterhooks for two hours. I never felt so relieved as when the rain of questions ended and, satisfied by our answers, they acquiesced in the session.*

(Commissioner McKenna as quoted by Fumoleau, 2004:78)

As a final note, the official report of the Treaty 8 Commission to the Government stated:

*Our chief difficulty was the apprehension that the hunting and fishing privileges were to be curtailed. The provision in the treaty under which ammunition and twine is to be furnished went far in the direction of quieting the fears of the Indians, for they admitted that it would be unreasonable to furnish the means of hunting and fishing if laws were to be enacted which would make hunting and fishing so restricted as to render it impossible to make a livelihood by such pursuits. But over and above the provision, we had to solemnly assure them that only such laws as to hunting and fishing as were in the interest of the Indians and were found necessary in order to protect the fish and fur-bearing animals would be made, and that they would be free to hunt and fish after the treaty as they would be if they never entered into it. We assured them that the treaty would not lead to any forced interference with their mode of life.*

(As quoted in Fumoleau, 2004:87-88)

These extended quotes from those who partook in or witnessed the treaty negotiations between the Government of Canada and the peoples of the Athabasca District – the Chipewyans and the Cree in particular – continue to provide the basis for the understanding by the Fort McKay peoples of the rights and freedoms they hold. As historian Rene Fumoleau writes:

*The memory of the Indian people is remarkably vivid and faithful to detail. This can be related to cultural conditioning which makes accurate perception and memory of environmental features and changes an essential condition for survival. Just as details of a trail through the bush are imprinted on his memory, so will the details of an important event of his life be permanently fixed in the Indian's memory.*

(Fumoleau 2004: xxi)

It is this solemn historical understanding that maintains to this day in the minds of the peoples of Fort McKay. The significance of the opportunity and right to pursue traditional activities for Fort McKay people cannot be overstated. [Appendix A](#) provides further context to Treaty and Aboriginal rights.

Table 2-1 illustrates the Fort McKay timeline since European contact. After Treaty 8 was signed, life in Fort McKay changed with the introduction of schools and government family allowance cheques attracting more people to settle in the Community. Although 17,000 acres of oil sands near Fort McMurray were leased for exploration by 1910, it would be another half century before industrial development overwhelmed and undermined (literally as well as figuratively) the traditional lifestyles and activities of the Fort McKay peoples.

The immense challenge before the Community is to navigate and respond to ongoing changes to their culture heritage. This report discusses the 44-year period from 1964 to 2008 and provides an assessment of the unique and profound impacts oil sands development has had on the people of Fort McKay. Changes and impacts to the Community and culture of Fort McKay people are contemporary. More than a third of current Fort McKay residents were alive 44 years ago when Great Canadian Oil Sands opened its first mine, when an all-weather road was first built to Fort McKay, when the last residential school in the region closed and when the population of Fort McMurray was less than 2,000.

Table 2-1: Timeline of Key Events Impacting the Community of Fort McKay since European Arrival

Century	Year	Event	Traditional Lands Disturbed	Fort McMurray Population
18 <sup>th</sup> Century	Early 1700s	Arrival of fur traders <sup>[1]</sup>		
	1778	1 <sup>st</sup> Fur Trading Post in Alberta - Pond's Fort on the Athabasca River <sup>[1]</sup>		
	1788	Fur Trade Post established at Fort Chipewyan <sup>[1]</sup>		
19 <sup>th</sup> Century	1820	HBC Post established at Fort McKay <sup>[2]</sup>		
	1899	Treaty 8 signed <sup>[3][4]</sup>		
1 <sup>st</sup> Half of 20 <sup>th</sup> Century	1902	First residential school opened in Fort Chipewyan <sup>[5]</sup>		
	1905	Province of Alberta created <sup>[1]</sup>		
	1910	17,000 acres of tar sands near Fort McMurray leased for exploitation <sup>[1]</sup>		
	1921	Railway from Edmonton reaches Clearwater River near Fort McMurray <sup>[1]</sup>		
	1930	Alberta gains jurisdiction over natural resources including Crown Lands and mineral deposits <sup>[1]</sup>		
2 <sup>nd</sup> Half of 20 <sup>th</sup> Century	1960	Aboriginal Canadians no longer required to give up their treaty rights and renounce their status under the <i>Indian Act</i> in order to qualify for the vote <sup>[6]</sup>		
	1963	Pre-Development Land disturbance (FM traditional lands) <sup>[7]</sup>	170,800 ha	
	1964	Commencement of Planning/Construction of GCOS mine <sup>[8]</sup>		
	1966	Population of Fort McMurray <sup>[9]</sup>		2,614
	1967	Completion of all-weather road to Fort McKay <sup>[10]</sup>		
		GCOS mine opened - Suncor Millenium <sup>[8]</sup>		
	1970	Last residential school in area closed <sup>[5]</sup>		
	1971	Population of Fort McMurray:		6,750
	1973	Syncrude construction started <sup>[11]</sup>		
	1978	Syncrude mine opened - Mildred Lake <sup>[11]</sup>		
1981	Population of Fort McMurray: <sup>[9]</sup>		30,772	

Century	Year	Event	Traditional Lands Disturbed	Fort McMurray Population
2 <sup>nd</sup> Half of 20th Century (cont'd)				
	1982	Suncor Oil Spill <sup>[12]</sup>		
	1986	Electricity comes to FM <sup>[13]</sup>		
	1988	Piped water and sewerage comes to FM <sup>[13]</sup>		
	1996	DFO ends dredging of Athabasca River <sup>[14]</sup>		
	1999	Population of Fort McMurray <sup>[15]</sup>		40,020
21 <sup>st</sup> Century	2000	Shell - Muskeg River Mine construction <sup>[16]</sup>		
	2002	Shell - Muskeg River Mine opened <sup>[16]</sup>		
	2006	Syncrude - Expansion #3 opened <sup>[17]</sup>		
	2007	Population of Fort McMurray <sup>[15]</sup>		83,972
	2008	CNRL Horizon Mine opened		
		Current Land Disturbance of FM Traditional Lands <sup>[7]</sup>	665,000 ha	

[1] Fumoleau 2004

[2] ATC

[3] ACFN 2003

[4] FMFN 1994

[5] AFN

[6] CHRC

[7] Golder Associates 2009

[8] Suncor

[9] Library and Archives Canada

[10] Campbell et al. 2005

[11] Syncrude Canada Ltd

[12] FMTA 1983

[13] D. Molstad pers. comm. 2009

[14] Hurst

[15] RMWB, 2007

[16] Shell Canada

[17] Oilsands Review

Note: 37% of Fort McKay residents alive today were born before 1964. They were alive to see the old ways and the incursion of the industry.

### 3.0 Overview of Change: 1960s through 2008

Up until the 1960s, the economy and way of life for the people of Fort McKay was the traditional “bush” economy, based on a seasonal cycle of hunting, trapping, fishing, and gathering. This way of life is founded on a deep respect for the land and all it contains. By living and working together on the land, kinship networks were strong and the core cultural values influencing individual behaviour were instilled. The people of Fort McKay believe they are part of the land, which was given to them by the Creator to care for and to safeguard the wellbeing of all the creatures and living things it nurtures. As stated in the Community paper on regional development in 1983, *From Where We Stand*:

*You cannot separate our economy from our culture. Nor can you separate either of these from the land.*

(FMTA 1983:18)

The Fort McKay Tribal Administration (currently know as the Band Administration) described the 1960s as the “approximate time period in which year-round settlement and living patterns began to centre more permanently in Fort McKay to get supplies, trade, so their children could attend mandatory school, and receive family allowance payments. This period also corresponds to the introduction of permanent housing provided by the government through the Department of Indian (and Northern) Affairs” (FMTA 1983:35, 83).

However, even with these changes, the Community maintained a strong tie to the land:

*While the introduction of formal education and other imposed government policies brought a curtailment to some (traditional harvesting) activities, the reliance on the traditional economy and the transmittance of cultural values through the traditional life style continued very strong until the invasion of Fort McKay’s traditional lands by major resource development projects.*

(FMTA 1983:35, 83)<sup>1</sup>

The trapping economy decline was later exacerbated in the late 1970’s due to European anti-trapping campaigns that precipitated a drop in demand for fur with prices for pelts plummeting. This did not, however, detract Fort McKay community members from trapping for themselves (e.g., meat, hides) or for the greater community. As noted, only about 20% of the wage economy was based on trapping,

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<sup>1</sup> It should be noted that to a limited extent actions such as European attitudes and associated responses to fur trapping practices have influenced fur sale costs and ultimately trapper’s compensation for fur.

serving to supplement wage incomes, in addition to providing the larger need of sustenance.

*A detailed Community traditional economic study states that:*

*In the 1960s, the economy of the Fort McKay peoples was almost entirely derived from the natural resources of their traditional lands. The traditional economy harvested moose, bear and other large animals for meat, clothes, tools and shelter. They harvested fish as a dietary staple as well as food for their dogs. They also harvested waterfowl, and grouse, hares, berries and traditional medicinal plants. Trapping fur-bearing animals was always a part of the traditional life but when furs became part of the market economy with the introduction of the fur trade... it also became profitable. By the time Treaty 8 was signed in 1899, the trapping economy was a significant part of the economy of Fort McKay.*

(Tanner et al. 2001:1)

*Trapping activities associated with the fur trade complemented traditional harvesting activities ... Technologies like metal tools, knives, guns and matches made life easier for the hunters and trappers. When the first intensive industrial development arrived in this area the traditional economy comprised most of the livelihood of the Fort McKay peoples. Trapping activities made up approximately 20% of their activities and there was limited participation in other employment activities like river transportation, the sawmill and construction.*

(Tanner et al. 2001:10)

*Within our community we submit that it is the wage economy which supports the traditional economic activities rather than the other way around.*

(FMTA 1983:243)

Even through the early 1960s Fort McKay's way of life changed little. Communication with the south was by winter road in the cold winter months and by the Athabasca River during the summer months. However, in 1964, construction began on the Great Canadian Oil Sands Company plant and thousands of people flocked to Fort McMurray. Then came the permanent road linking Fort McKay to Fort McMurray and points south. With increasing oil sands development,

*came the loss of berry grounds and trap lines and depletion of fish and resources and wage jobs, and more cash and less time in the bush, easy access to alcohol and drugs and very little time to adjust and cope with changes and no special programs to help them cope with family and community problems, mental and physical stress.*

(FMTA 1983, p.35)

Today, oil sands development is the largest use of land for heavy industrial purposes within Fort McKay's Traditional Lands. Six open pit mines<sup>2</sup> exist within 20 miles of Fort McKay and more than 20 companies hold mineral leases within the Fort McKay's Traditional Lands (HEG 2009). As Fort McKay's *Healing the Earth Strategy* describes,

*Oil sands projects have been approved to the north, south, east and west sides of the community. Fort McKay is literally overwhelmed trying to effectively deal with development, being surrounded by oil sands, pipelines, forestry and other industrial activities that have taken up...[the] most intensely used area of Fort McKay's traditional lands.*

(Fort McKay IRC 2004)

At the same time and as a direct result of this industrial development, the number of people living in the Traditional Territory boundary has grown from about 2,000 in the mid 1960s, to approximately 90,000 today (including work camps and other communities in the Regional Municipality of Wood Buffalo (RMWB 2007).

The people of Fort McKay believe that it has been the large scale taking up of lands by industrial development since the 1960s, the associated air and water pollution, and the influx on non-Aboriginal people to the region that have had the most significant effects on their culture. Indeed, as this report will document, the significant changes to their Traditional Lands whether directly by industrial footprints and denied access, or indirectly by effects on wildlife and fish habitat and populations, pollution of the products of the lands that still remain available for traditional use, or by the increased presence of non-Aboriginal people on what land remains unaffected, has given the people of Fort McKay no choice but to shift from a mixed economy (traditional activities plus wage work) to an essentially completely wage-based economy. This is not to say that everyone in Fort McKay wishes to get a wage job or that everyone wishes to continue traditional activities and life on the land, but that the choice has been removed.

This lack of choice, because the land base is no longer sufficient, accessible or sufficiently productive, in essence has denied the people of Fort McKay the ability to enjoy the promises made to them in Treaty 8: "that they would be free to hunt and fish after the treaty as they would be if they never entered into it. We assured them that the treaty would not lead to any forced interference with their mode of life" (Fumuleau 2004: 88).

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<sup>2</sup> Existing oil sands mines located within a 20-mile radius of Fort McKay include Syncrude Canada Limited's Base Mine, Suncor Energy Inc.'s Steepbank and Millennium Projects, Shell Albion Sand's Muskeg River Mine and Expansion, Syncrude's Aurora North Mine, Canadian Natural Resources Limited's Horizon Project and Imperial Oil Resources' Kearn Project.

## 4.0 Cultural Change and the Land

While most societies experience continuous social change in response to economic, ecological and technological changes, researchers studying the effect that large-scale development has on Aboriginal cultures suggest that where such change is rapid and largely out of the control of those affected. The effect is eroded confidence in a Community's ability to control its own destiny (Erikson and Vescey 1980:159).

This experience is reflected in 'cultural stress', a term used to describe a condition that results from the erosion of integrity of cultural systems and which manifests as psychological, physical, emotional, and/or spiritual health disorders.<sup>3</sup> Cultural stress is described in the *Report of the Royal Commission on Aboriginal Peoples – Volume 3: Gathering Strength* (INAC 2006) as:

*a factor negatively affecting the well-being of First Nations people and communities throughout Canada. ... In cultures under stress, the smooth operation of society and the sense life makes to its members can be seriously impaired. Culturally transmitted norms that once provided meaning and guided individual behaviour become ineffectual as rules for living or sustaining relationships, and the rules themselves fall into disrepute. People lose confidence in what they know and in their own value as human beings. They may feel abandoned and bewildered and unsure about whether their lives have any real meaning or purpose.*

Fort McKay Community members note the stress on their daily lives caused by industrial activities:

*Mentally, we are always thinking of what has happened to us. You are always worried. This is stress.*

*Everything is stress. We are apprehensive about eating berries. Stress is driving to town: going through Syncrude and seeing the land that has been taken. All our rivers are polluted. Now we need to go to other places but we are driven from our land. Our Spirit has been taken.*

(Fort McKay Workshop September 2008)

The identity of the Fort McKay people is rooted in time and place to the land. "Since time immemorial we have roamed this land, lived from this land, and been part of this land. To separate us from this land would be to split our very identity in two" (FMTA 1983:1). This tie to the land is not unique to Fort McKay. Other Aboriginal

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<sup>3</sup> See also: Whitbeck et al. 2004. Conceptualizing and Measuring Historical Trauma among American Indian People, *American Journal of Community Psychology*, Vol.33, Nos. 3/4, June 2004, and Alexander et al. 2004. *Cultural Trauma and Collective Identity*, University of California press, and Sztompa, P. 2000. Cultural Trauma – The other Face of Social Change. *European Journal of Social Theory* 3(4).

peoples' experience has a similar perspective: that traditional land use is the means by which their system of social and economic relations, the values associated with them and the viability and identity of their Community are maintained; that traditional land use arises not from the desire to accomplish certain narrow economic ends, such as bringing home food, but from the values and relationships that traditional land use sustains (North/West Resources Consulting Group 1997).

As will be shown throughout this report, the people of Fort McKay believe that industrial development is limiting their ability to carry out cultural activities within their Traditional Lands and that this has significant adverse effects on the maintenance of their cultural heritage.

## 5.0 Fort McKay Cultural Model

### 5.1 Development of the Fort McKay Cultural Model

As noted above, the objective of the CHA Baseline is to provide an assessment of the cumulative impacts of industrial development on the cultural heritage of Fort McKay. Culture affects the way in which people understand themselves, their land, their Community and their relationship with the spiritual world, that is: “the set of attributes, beliefs, and values current in an entire population which gives order and meaning to a society and provides the underlying assumptions and rules that govern people’s social behaviour” (HEG 2009:5).

The people of Fort McKay prefer to more simply define culture as “a way of life”.

In order to undertake this cultural heritage assessment, the Community of Fort McKay asked for and received the assistance of a research team of cultural heritage specialists and anthropologists in developing a model in which to express their perspective (see HEG 2009). The research team worked with the Community of Fort McKay to enunciate the Community’s understanding of what has happened to their culture since the 1960s to the present. Research methods included a literature review of Community and regional documents and Community workshops and focus groups conducted in Fort McKay with participants from all age groups. A core group of Community members participated in all events, giving continuity to the process and the participants a deeper understanding of the issues. The iterative process of data collection, analysis and Community feedback/validation provided insight into the meaning of concepts and experiences expressed by the Community.

### 5.2 The Model

The framework developed by the research team, and supported by the Community, is composed of four primary cultural components that describe the ways in which people experience culture (Figure 5-1):

- Self (individual identity, awareness and relationship with one’s own self),
- Community (group awareness and relationships with the Community as a social unit including parents, Elders, extended family, peers, neighbours, leadership etc.),
- Land (awareness and relationship with the physical environment, including water, animals, plants air and everything else on the “land”), and
- Creator (awareness and spiritual relationship with the creator and ancestors).



**Figure 5-1: Cultural Components**

Based on feedback from Community workshops and literature reviews these four cultural components were then linked with an emerging set of Community values. Because identifying the values (the principles or standards that guide action and behaviour) that are considered to be at the core of culture can be challenging, workshop participants were encouraged to talk about a range of select key Activities that are carried out by Community members to help focus discussions and ascertain “what is valued” by the Community. These “Traditional Activities” characterize the Fort McKay “way of life” in the 1960s and in modern times providing points for comparison. These Traditional Activities reflect cultural values: when Activities are modified (e.g., due to technological development, environmental changes or external pressures), values are thus affected.

During the development of the CHA, twelve values were identified and supported by the Community:

- Tradition
- Self-reliance
- Self-determination
- Cooperation
- Caring

- Cohesion/bonding
- Connectedness
- Purpose
- Peace
- Rootedness
- Rhythm of nature
- Respect

While recognizing that these are not the only values inherent in Fort McKay culture, these values were consistently mentioned by Community members when describing the way industrial development has affected how people relate to each other, to the land, to the Creator and how they personally understand themselves as part of the Community. The model was validated and fine-tuned by the Fort McKay Community. Figure 5-2 portrays the relationship between values and Fort McKay culture.



Figure 5-2: Fort McKay Cultural Model

Table 5-1 briefly explains each of the values, including English, Dene and Cree translations and interpretations of the values. The last column in the table articulates the working project definitions utilized at Community workshops and focus group meetings.

Similar to the process for selecting values, Community members selected representative Activities that have been affected by industrial development since the 1960s, including:

- Hunting
- Fishing
- Trapping
- Berry picking
- Wage employment
- Education
- Visiting
- Raising children

While recognizing that there are many other activities that characterize the Fort McKay way of life, these activities were selected because they were central to Fort McKay's life during the 1960s or have developed as a response to increasing industrial development.

As will be discussed in Section 6.0, there are stressors caused by industrial activity that adversely impact the ability and opportunity of the Community of Fort McKay to carry out traditional Activities. And as mentioned above, based on assumptions in the Fort McKay Cultural Model when changes in traditional Activities occur, Values – and ultimately Fort McKay's Cultural Heritage – are affected.

Table 5-1: Linkages between Cultural Components and Values

Cultural component	Values - English	Values - Dene	Values - Cree	Project Definition
<b>Self</b> The following values are rooted in this Cultural Component because they are naturally founded on the continuous development of self-knowledge	<b>Tradition</b>	<b>Nónisnóde,</b>	<b>Kayāsohei isitwawin, āniskototamowin</b> Handing down of beliefs, opinions, customs, stories etc. from one generation to another.	Actions or activities carried out to pass knowledge, skills and attitudes from one generation to the next. According to Hobsbawm (1983), tradition involves a set of practices governed by accepted rules of symbolic nature that seek to instill certain values and norms of behaviour by repetition, which automatically implies continuity with the past.
	<b>Self-reliance</b>	<b>Etdeghes ng,</b>	<b>Mamistotasewin</b> Independent.	The ability to provide for yourself and your family on your own or as part of a group.
	<b>Self-determination</b>	<b>Yaníst'ine bēch'anië</b>	<b>Ahkameyittamowin</b> Believing in yourself.	The ability to freely decide how to live; including individual behaviour, government, and use/management of resources.
<b>Community</b> The following values are related primarily to social interaction	<b>Cooperation</b>	<b>Elts'e hildi</b>	<b>Nesikamatowin</b> Helping one another.	Working together to attain common goals.
	<b>Cohesion/ Bonding</b>		<b>Miyo wiceeh to win</b> Getting along.	The relationships that Community members have to each other.
	<b>Caring</b>	<b>Etk' erailni</b>	<b>Nakateyimtowin</b> Looking after, attend to.	Looking after each other - giving attention to other people's needs and supporting people to meet those needs.

Cultural component	Values - English	Values - Dene	Values - Cree	Project Definition
<b>Land</b> The following values are mainly related to the relationship between the culture and the natural environment. This component is particularly important for Aboriginal communities because of their deep relationship with the land.	<b>Rootedness</b>	<b>Etaghelant'e ninet</b>	<b>Tipiyawehona, kamekowsihk</b> Belonging to; the people of the land.	Very deep feelings of attachment and belonging to the land. People <i>are part of</i> the place; the bond between some people, plants, animals, landscape and local spirits cannot be broken.
	<b>Rhythm of Nature</b>	<b>T'ant'u daghana</b>	<b>Piyakwan kisiwepinkehk, tohtwaskiy</b> Conducting activities seasonally.	Living and conducting activities by natural cycles – a seasonal round.
	<b>Respect</b>	<b>Y'ek'eg'dli</b>	<b>Manatcihiwewin</b> Show consideration for.	Recognition that everything on earth has rights and privileges that are acknowledged and valued. Nature is understood in and on its own terms (Cajete 1994)
<b>Creator</b> These values are related to the connection with ancestors and the spiritual world; they are concerned with something beyond the boundaries of one's own life – transcending the physical world.	<b>Peace</b>	<b>Nezo nàde</b>	<b>Peyatik pimatiswin</b> Living in peace.	A life free of conflicts. It is related to harmony in nature and with the people around you, where all creatures have the right to live in tranquility with one another and within themselves.
	<b>Purpose</b>	<b>T'at'ina</b>	<b>Pimātiswin, kamekosihk</b> Aim to live and work in perfect harmony.	The meaning that actions have. It is related to the spiritual connection of humans, plants, animals and mother earth as a whole.
	<b>Connectedness</b>		<b>Aniskot asewnamatowin tāpwewakeyihom owin</b> Joined in order, connected ideas.	The spiritual connection that Community members have with the Creator, their past and traditions through their ancestors, others in the Community, and the land. It also refers to the understanding that each of those aspects is linked to one another and form part of a whole.

## 6.0 Cultural Stressors

Fort McKay has experienced significant socio-cultural change since the 1960s. Some of that change has originated within the Community; however, other changes are externally driven. Externally driven changes include government policies, introduced technological change and influences from mainstream society (for example, the negative impacts on trapper income due to European “fur bans”). Many Aboriginal groups across Canada are affected by similar influences. However, for the people of Fort McKay oil sands development is among the external influences that place the greatest stress on activities that are integral to their way of life. One of the key purposes of this assessment is to attempt to distinguish between the various sources of cultural stress, in particular to identify the role of industrial development.

Due to its geographic location, Fort McKay is in a uniquely vulnerable position in terms of impacts from industrial development. As may be seen in

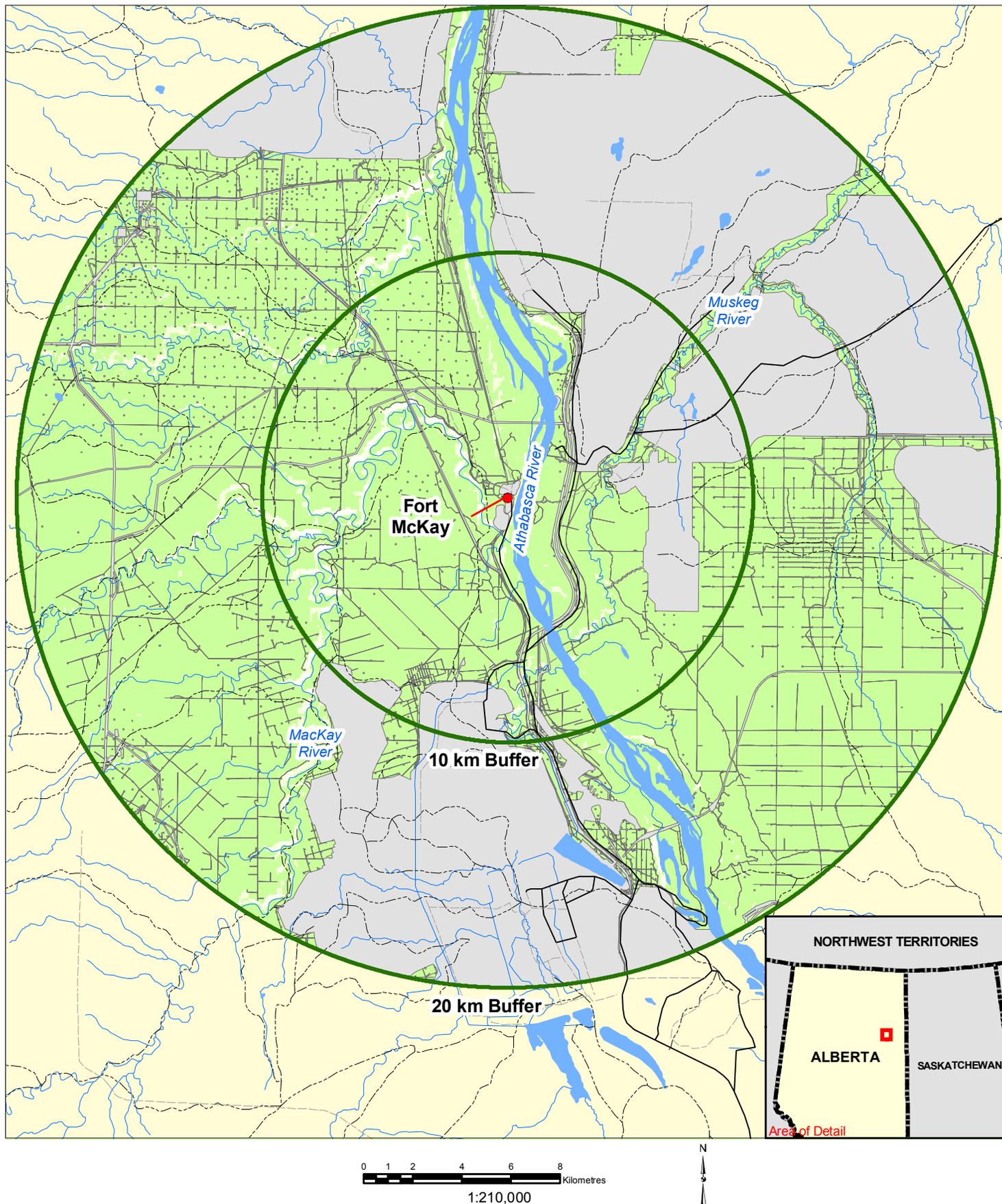
Figure 6-1, the Community is almost completely encircled by oil sands developments. Within a 20 km radius of the Band Administration offices there are currently eight operators and 39.1% of the land is directly disturbed (close to 50,000 ha; Golder 2009). If we include currently undeveloped tenures, land on which a lease has been granted rendering it likely to be developed, 90.5% of the land within a 20 km radius of the Band Administration offices<sup>4</sup> is vulnerable to disturbance (close to 114,000 ha). Calculations of currently disturbed areas include only those locations that have experienced a direct loss of land (i.e., mines, seismic, roads, municipal, pipelines, wellsites). It does not include “indirect” land disturbance from pollution or noise, for example, which might have a profound impact on people’s opportunity to utilize the land. Further, existing disturbance places a strain on Community member’s ability to access “undisturbed” sites.

It is only with difficulty that many portions of the Traditional Lands can be accessed for traditional activities. Fort McKay Community members find it challenging to know what areas are accessible and what areas are not. Increasing development in the region<sup>5</sup> makes it hard to keep track of areas that the Community can access for traditional activities. Indeed, every summer, Elders and other Community members are transported by plane to Moose Lake at the far western edge of their Traditional Lands to pursue traditional activities in a culturally important area that is relatively undisturbed by development. In response, the Fort McKay IRC continues to work on

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<sup>4</sup> Within a 10 km radius of the Band Administration offices 25.4% of the land is currently disturbed and 82.7% has the potential to be disturbed once currently undeveloped tenures have been developed.

<sup>5</sup> Recent studies indicate that resource extraction in Northern Alberta, and in particular oil sands development “has removed or degraded land and resources to the extent that those resources can no longer support subsistence harvest or related uses by First Nations and Métis populations” (Parlee 2008 in HEG 2009).



**Legend**

- Fort McKay
- Fort McKay Buffers
- Current Case Disturbances
- Rivers
- Lakes
- Major Roadway
- - - Secondary Roadway
- Railway
- - - Traditional Trail

**Figure 6-1:**  
**Current Case Disturbances**  
**within 10 and 20 km Buffers**  
**of Fort McKay**

Produced By: S Parker  
 Date: August 6, 2009  
 Data Sources: Government of Canada,  
 Fort McKay First Nation, Golder

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development of an access management plan that will help Community members understand what areas are being developed.

As well as the sheer physical proximity of the industrial development, many Community members perceive that the air they breathe, the water they drink and the traditional foods they eat are being affected by industrial pollution. A major chemical spill upstream on the Athabasca River in 1982, which was only reported to the Community after much delay (FMTA 1983: 229) and frequent air quality warnings (see Section 8.3.4 for further detail) have together left the Community uncertain about their health prospects. Many Community members feel that even as Traditional Lands are being taken away for industrial use, industrial pollution renders the remaining lands unable to support the nutritional needs of the Community. Industrial impacts surrounding Fort McKay are a cumulative force that adds to other external stressors, accelerating and causing significant cultural change (discussed further in Section 8.3).

Generally speaking, health risk perception of an individual, family, or community revolves around their belief of how they are being exposed to industrial pollution – how often and at what levels and whether they believe their health will be affected. This perceived risk might be higher than the more objective risk obtained from a conventional health risk assessment. This perceived risk<sup>6</sup> increases stress within the individual, family or community; and might influence behaviour of the individual, family or community group. Both of these outcomes will influence health as well as cause behavioural changes. For Community members in Fort McKay, perceived pollution had caused overall concern about the safety and quality of air they breathe, the water they drink and the food they consume. As well, perceived pollution has, in part, changed the way Community members interact with the land at a variety of levels.

The people of Fort McKay recognize that cultural changes have been a result of a number of factors including residential schools, government policies and pressures from mainstream society in general. However, the Community believes that it has been the large-scale taking up of lands by industrial development since the 1960's, the associated air and water pollution, the large-scale influx on non-aboriginal people brought by oil sands development to the region, and the inability to maintain the preferred mixed economy (i.e., traditional hunting, trapping and gathering activities supplemented by wage work) that have had the most profound effect on their culture.

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<sup>6</sup> How perceived risk might affect a Community can be illustrated by considering a local industry which has periodic odorous emissions. Even assuming that the odorous emission has no acute or chronic health effect other than a nuisance odour, the periodic smell acts as a constant reminder that the environment is not pristine and that some degree of pollution is occurring.

*Industry didn't start it, but has made it more.*

*When Suncor arrived here; that is when everything changed. They used to cut all the trees. They killed everything when they cleared the land. There is nothing left on my line – they killed it all. I am an old trapper; I have lived here my whole life... When Elders pass away everything will stop.*

(Fort McKay Workshop June 2009)

The main stressors identified by the peoples of Fort McKay during Community workshops are presented in Table 6-1. The Community-defined stressors have been grouped into the following themes:

- Loss of land
- Pollution
- Reduced access to land
- Industrial water use
- Wage economy
- Increased population

For each stressor, Community members identified the role the oil sands industry plays in causing or augmenting the pressure on the Community. The selected impacts of each stressor together with the Community perception of the stressor and its relationship to Industry are articulated. The stressors identified by Community members are supported by information contained in numerous EIAs, Community reports and scholarly papers listed in [Appendix B](#).

**Table 6-1: Industrial Development Stressors on Fort McKay**

<b>Stressor</b>	<b>Selected Impacts</b>	<b>Community Perception*</b>	<b>Relation to Industry</b>
<b>Loss of Land</b>	Limits opportunity and capacity to hunt, trap and gather. Loss of land around Fort McKay has limited opportunities for traditional inter-generational transfer of knowledge	<ul style="list-style-type: none"> <li>• Industry has changed the land</li> <li>• Loss of land and reliance on the wage economy has changed the way we spend our time and who we spend our time with</li> <li>• Industry has driven the animals away and changed the way they behave</li> </ul>	Industrial developments (oil sands mines, SAGDs, upgrading facilities and related infrastructure; pipelines, transmission lines and roads) disturb large areas, eliminate wildlife habitat, change local hydrology and create linear disturbance
<b>Pollution</b>	Decreased quality of country foods; concerns over pollution decreased motivation to consume wild meat, fish and berries, reducing time spent hunting, fishing and gathering	<ul style="list-style-type: none"> <li>• Industry has contaminated our food</li> </ul>	Emissions and effluents from mine upgraders, mine fleets and related infrastructure cause air, water, and soil pollution resulting in direct human health effects and bio-accumulation in fish, wildlife and plants (real and perceived)
<b>Reduced Access to Land</b>	Reduced ability to hunt, trap and gather and fish	<ul style="list-style-type: none"> <li>• Industry has reduced our access to our traditional land</li> <li>• Industry has affected the animal's habitat and movement</li> </ul>	Linear disturbance, gates and safety related access restrictions on mine and SAGD leases
<b>Wage Economy</b>	Work schedules at the mines limit the amount of time Community members can spend on the land and the duration of traditional harvesting excursions. Shift work and incentives for working overtime have changed individual's availability to be on the land and to care for children in the traditional way. The desire and need for higher paying jobs has increased the importance of non-traditional education	<ul style="list-style-type: none"> <li>• Reliance on the wage economy has changed the way we spend our time and who we spend our time with</li> <li>• Time pressures related to work and school have affected the composition of hunting and berry picking parties</li> <li>• Wages from industry jobs affect the way we hunt</li> <li>• Industry has affected the cost of living and educational requirements for employment</li> <li>• Industry and government have required Fort McKay's government services to grow</li> </ul>	Loss of land, access and pollution has diminished the opportunity and capacity of the Community to combine traditional and non-traditional economic activities. The majority of positions that McKay Community members qualify for are labouring/ shift work positions  Increased oil sands development affects cost of living, time on the land and changes focus of education

Stressor	Selected Impacts	Community Perception*	Relation to Industry
<b>Increased Population</b>	Increases pressures on local resources and reported conflicts between Aboriginal and non-Aboriginal people, increased cost of living, increased access to drugs and alcohol, decreased feelings of security, decreased Community cohesion	<ul style="list-style-type: none"> <li>• Industry related population increases have increased the level of goods and services available in Fort McMurray</li> <li>• The influx of non-aboriginal workers has affected the cost of living and educational requirements for employment</li> <li>• Industry has increased access to drugs and alcohol</li> <li>• Increased access to traditional lands by non-Aboriginal people</li> </ul>	The simultaneous development of several large oil sands projects in the region has created an unparalleled demand for skilled workers which has resulted in a rapid increase in the number of non-Aboriginal people moving into the region thus affecting the cost of living and social conditions

\* "Industry" refers to the oil sands industry

## 7.0 Indicators of Cultural Change

As has been discussed, Fort McKay has experienced cultural change as a result of industrial activity. To assist in measuring the impacts of these stressors, Fort McKay has identified a series of indicators - both qualitative and quantitative - that are utilized in both the Environmental Specific Assessment and the CHA Baseline. This section outlines these indicators and their linkages throughout the FMSA, with an emphasis on the Measures of Industry Stressors.

The Community, through workshops and focus groups conducted for this Cultural Heritage Assessment, has developed an extensive list of Traditional Activities and indicators for their measurement. Together they comprise the *indicators of cultural change*.

- ***(Select) Traditional Activities*** – These are indicators of cultural values. They are used in this CHA Baseline report and include: Hunting, Fishing, Trapping, Berry Picking, Wage Employment, Education, Visiting, Raising Children (as discussed in Section 6.0).
- ***Industry Stressors*** – These indicators refer to Community-determined stressors caused by industry on Traditional Activities and include: Loss of Land, Pollution, Reduced Access to Land, Wage Economy and Increased Population (as discussed in Section 7.0).
- ***Measures of Industry Stressors*** – These measures are derived from Community workshops. When appropriate, they have been linked with indicators from the Environmental Specific Assessment (see Sections 9.0 to 12.0).

These indicators are described in detail in *Indicators of Cultural Change 1960 to 2009: a Framework for Selecting Indicators based on Cultural Values in Fort McKay* (HEG 2009).

### 7.1 Selection of Measures Included in this Assessment

A three-step process was used to select the measures utilized in the CHA Baseline:

- ***Step 1:*** Compile Community-proposed measures of industry-related stressors gathered during workshops and focus groups (qualitative and quantitative).
- ***Step 2:*** Cross reference information from Step 1 with known available environmental indicators (quantitative).
- ***Step 3:*** Finalize a list of quantitative indicators for use in the CHA Baseline.

These steps are detailed below.

## Step 1

Measures of industry stressors were grouped by the Community-defined stressors discussed in Section 7 - Loss of Land, Pollution, Industrial Water Use, Access to Land, Wage Economy, and Increased Population. Each of these stressors represents a suite of issues that are connected by a central theme. For instance, *loss of land* includes direct disturbance, linear disturbance as well as environmental changes that affect fish, plants and wildlife rendering them “lost” (or less available) for cultural purposes. Community perceptions and interpretation of industry-related stressors on the land and their cultural heritage are a collection of quantitative items involving measurements and qualitative items which often help contextualize the quantitative indicators and give them cultural meaning and significance. For example, the number of gates interrupting land access is one quantitative measure suggested by Community members to indicate *Access to Land* and “trapper experience” was suggested as another, qualitative, measure which helps inform how changes in people’s ability to move across the land is interpreted by the people of Fort McKay.

## Step 2

Fort McKay linked indicators proposed by the Community with indicators being assessed in the Environmental Specific Assessment (see [Appendix C](#) for a table detailing this linkage). It should be noted that not all of the Community-proposed measures of industry stressors were assessed in the Environmental Specific Assessment. Further, as many of the indicators in the Environmental Specific Assessment are quite technical in nature, they were not necessarily proposed by the Community. For example, Community members indicated that air quality is important to measure and monitor, but did not mention the particular compounds that should be measured.

## Step 3:

The Community’s suggested potential indicators were used when possible to develop quantitative indicators of industrial stressors based on currently available data. The measures of Industry Stressors included in this assessment, and discussed below, were selected based on the following criteria:

- relevancy to address Fort McKay Community concerns
- can be developed and utilized based on currently available information;
- contain direct linkage with industry-related land development; and
- correlate to conventional environmental concerns rather than socio-economic issues.

Table 7-1 shows the correlation between the Community-proposed measures of industry stressors and their linkages with indicators developed in the

Environmental Specific Assessment. Sections 8 through 10 of this report include an assessment of indicators from the Environmental Specific Assessment. A summary of the environmental indicators is provided in [Appendix D](#).

## 7.2 Pulling it All Together

A general model of Fort McKay's understanding of the complex relationships between culture and industrial impacts is shown in Figure 7-1. These relationships, detailed in Figure 7-2, illustrate both direct industry-caused environmental change leading to stressors on hunting, trapping, fishing and berry picking, and indirect industry-caused effects on environmental changes leading to stressors on child rearing, education and visiting, and the link between them: full-time wage employment necessitated by resource depletion and a changing economy. It also illustrates the pathways in which these effects are absorbed by the Community.

**Table 7-1: Potential Measures of Industry Stressors Proposed by the Community**

Industry Stressors	Measures of Industry Stressors Proposed during Community Workshops and Focus Groups	Quantitative Measures of Industry Stressors Selected for CHA Baseline
<b>Loss of Land</b>	<ul style="list-style-type: none"> <li>• % Land Disturbance</li> <li>• Kms of linear disturbance</li> <li>• ±wildlife/veg. abundance/distribution/quality</li> <li>• Habitat disturbance</li> <li>• Wildlife habituation</li> <li>• Loss of TLU sites (FMFN 1994)</li> <li>• Loss of "berry" habitat</li> </ul>	<ul style="list-style-type: none"> <li>• Traditional Lands Disturbance</li> <li>• Trapline Disturbance</li> <li>• Wetlands (muskeg)</li> <li>• Upland Forest</li> <li>• Biodiversity</li> <li>• Traditional Plants</li> <li>• Moose habitat and populations</li> <li>• Canada lynx habitat</li> <li>• Beaver habitat</li> <li>• Fisher/marten habitat</li> <li>• Protected areas</li> <li>• Reclamation</li> </ul>
<b>Pollution</b>	<ul style="list-style-type: none"> <li>• Air quality (visual and measured)</li> <li>• Smell</li> <li>• Water quality</li> <li>• Water quality perception</li> <li>• Look/behaviour of animal (TEK: hair, flesh, fat, gait, etc.)</li> <li>• Government directed health advisories</li> <li>• Colour/condition of fat and organs</li> <li>• Unusual smell, colour, spotting of flesh</li> </ul>	<ul style="list-style-type: none"> <li>• Air quality parameters: Sulphur Dioxide (SO<sub>2</sub>)</li> <li>• Air quality parameters: Nitrogen Oxides (NO<sub>x</sub>)</li> <li>• Odours</li> <li>• Air quality parameters: particulate matter (PM<sub>2.5</sub>)</li> <li>• Air emission effects on vegetation</li> </ul>
<b>Industrial Water Use</b>	<ul style="list-style-type: none"> <li>• # of Water licenses issued for the Athabasca River/traditional waterways</li> <li>• Volume of permitted industrial water use/year</li> <li>• # of accidents/malfunctions reported/year</li> <li>• # of traditional waterways affected by industry</li> </ul>	<ul style="list-style-type: none"> <li>• Watershed disturbance</li> <li>• Watershed Index for Athabasca watershed</li> <li>• Groundwater</li> </ul>

Industry Stressors	Measures of Industry Stressors Proposed during Community Workshops and Focus Groups	Quantitative Measures of Industry Stressors Selected for CHA Baseline
<b>Access to Land</b>	<ul style="list-style-type: none"> <li>• Gates</li> <li>• Permits to Access Land</li> <li>• Alterations to trails/roads</li> <li>• Trapper experience (reported delays, limitations etc.)</li> <li>• # of traditional waterways crossed by industry infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Linear disturbance</li> <li>• Traditional trails</li> </ul>
<b>Wage Economy</b>	<ul style="list-style-type: none"> <li>• Average hours of work</li> <li>• # People working for industry</li> <li>• Consumption</li> <li>• Cost of living</li> </ul>	<ul style="list-style-type: none"> <li>• Indicators to be developed in the future</li> </ul>
<b>Increased Population</b>	<ul style="list-style-type: none"> <li>• Population growth in the area</li> <li>• # People with hunting permits</li> <li>• Recreation activities (clubs, tours)</li> <li>• Populations in work camps near McKay</li> <li>• # of incidents on McKay trap lines</li> </ul>	<ul style="list-style-type: none"> <li>• Regional population trends in the RMWB</li> </ul>

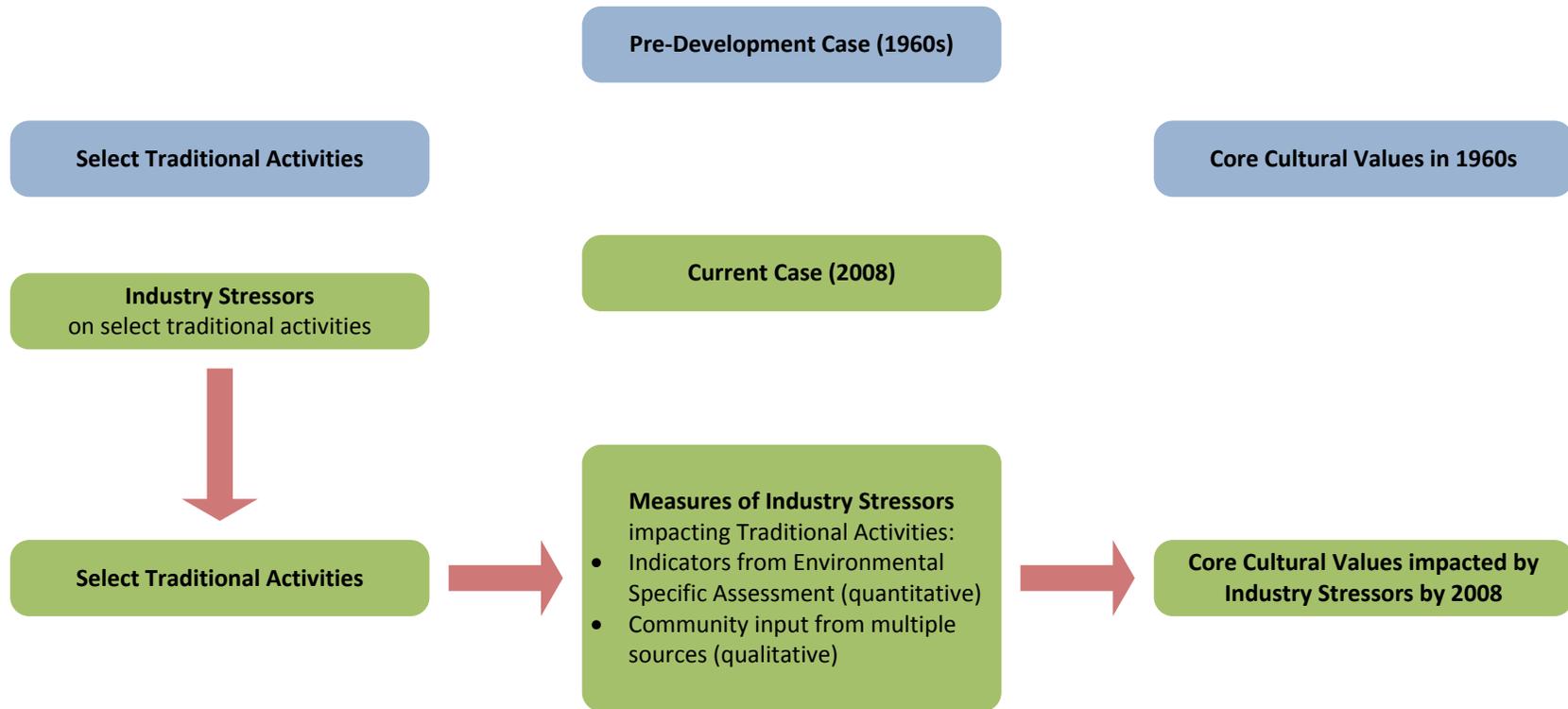
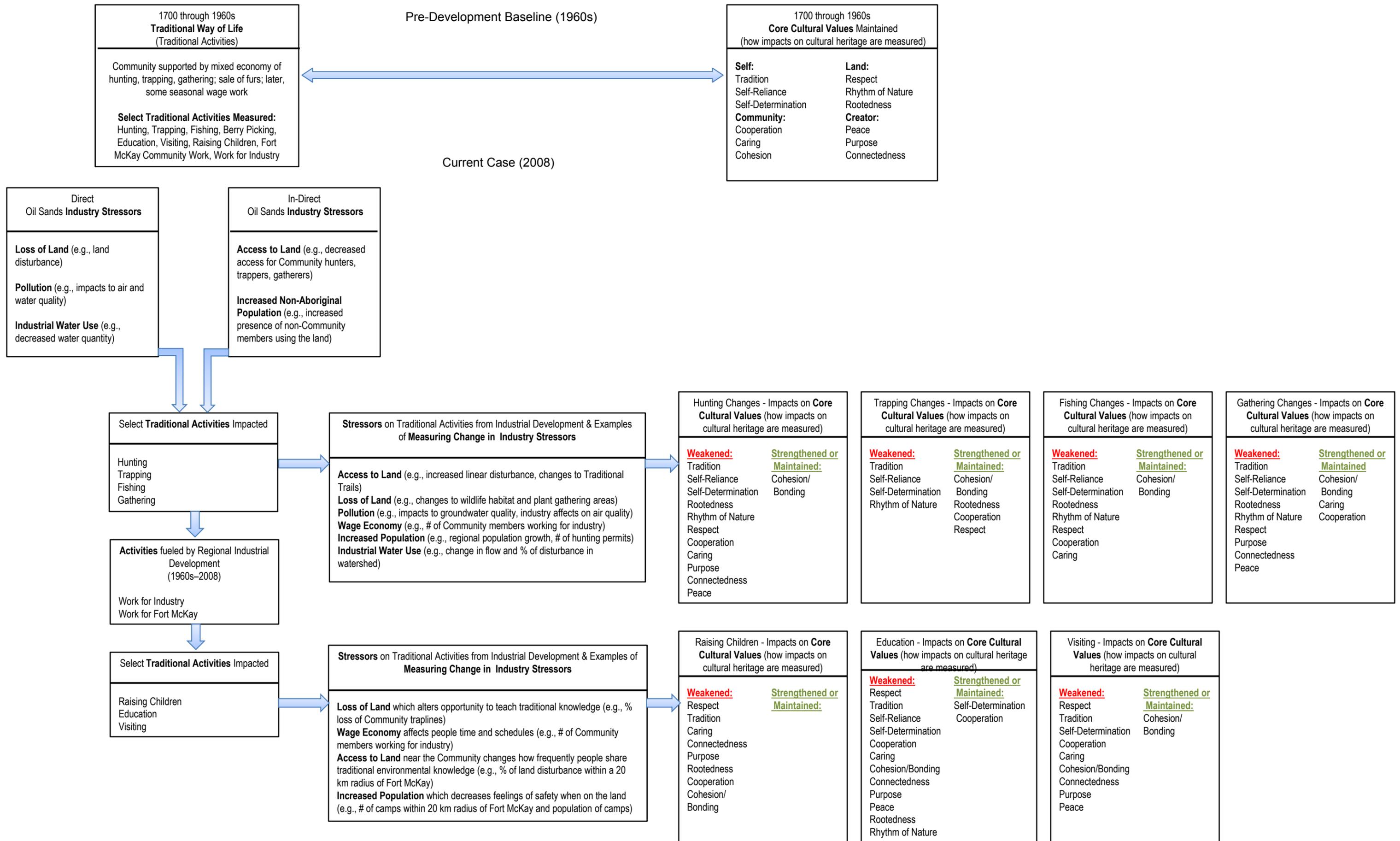


Figure 7-1: General Pathways of Impact of Industrial Activities on Cultural Heritage of Fort McKay



**Figure 7-2: Pathways of Industrial Impacts on the Culture of Fort McKay**



## 8.0 Changes in Culture Stemming from Changes to the Land

### 8.1 Hunting, Trapping, Fishing and Gathering in the 1960s (Pre-oil Sands Development)

*We are people of the land – hunters and gatherers*

(Fort McKay Workshop 2008)

The importance of living off the land to the Fort McKay culture cannot be overstated. “Our hunting and harvesting of meat is at the very centre of the Fort McKay way of life” (FMTA 1983). As hunters, trappers, fishers and gatherers, harvesting is important economically, culturally and socially. It provides food, reaffirms the continuing vitality of Aboriginal culture and strengthens the kinship links through which harvesting is organized and wild food distributed (Brody 1981, Brody 1987, Feit 1982, FMTA 1983, FMFN 1994, Appendix B).

*Hunting on the family trap line is synonymous with meat for the table, with stewardship of all natural resources; with extended family sharing; with socialization of children; with the role of the Elders as carriers and teachers of traditional environmental knowledge; and with cultural sustainability.*

(FMFN 1994)

Following a pattern of seasonal rounds, the people of Fort McKay have hunted and trapped a wide variety of animals throughout their Traditional Lands including, moose, caribou, bison, bear, lynx, wolf, fisher, muskrat, ermine, fox, beaver and mink. During the 1960s, as more Community members began to carry out hunting and trapping from the Fort McKay settlement, family Trapline areas became the most common hunting areas. From these areas, families worked as a unit to prepare for the dry meat hunting season and the spring hunt (FMTA 1983: 88, 90, 91). The spring beaver hunt traditionally focused on beaver, muskrat, otter, waterfowl and moose (FMTA 1983: 81). Hunting was so integral to Fort McKay culture that “understandably, expert hunters gained considerable social respect for their abilities to provide for all Community members” (Fort McKay Workshop 2008). These times spent on the land were crucial to the passing of skills, knowledge and traditions among the Fort McKay people. From harvesting to processing of animals, hunting (as well as trapping) has involved the entire Community of Fort McKay while supporting the sharing of cultural teachings.

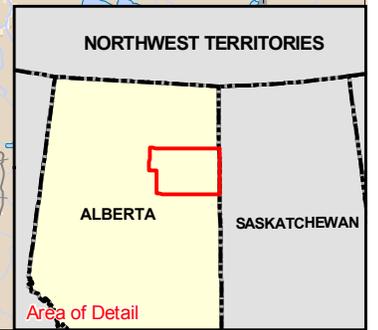
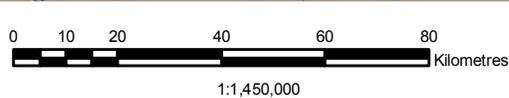
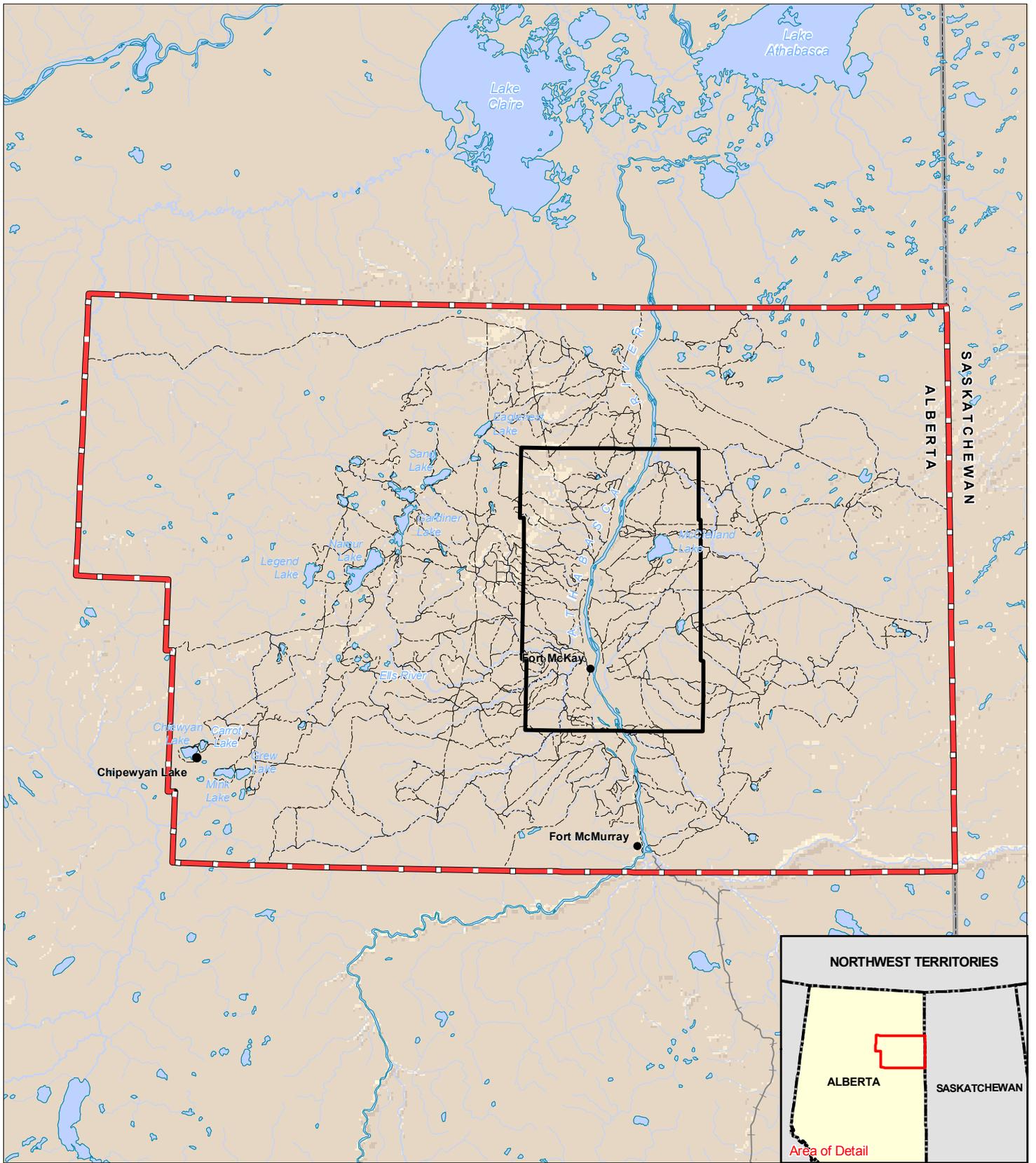
In Fort McKay trapping has always been considered part of the annual round of hunting and related harvesting activities. Even before the fur trade, small mammals were an important source of food and material used for clothing, tools and in some

cases medicine. While the fur trade undoubtedly transformed the local economy and supplemented family incomes, few people today see trapping as an income-producing occupation in and of itself. In fact, in most cases, what is “earned” in the bush is rarely treated as “income” (FMTA 1983). Trapping is part of the traditional way of life. As shown in the Traditional Land Use and Occupancy Study conducted by Fort McKay in 1994, intensive hunting and trapping zones included the Athabasca River corridor, the Namur (Buffalo) and Gardiner (Moose) Lakes area, Chipewyan Lakes, the Clearwater River corridor, Muskeg Mountain, the Firebag River, Johnson Lake and Richardson River (FMFN 1994).

An extensive network of trails (Figure 8-1), originally cut by hand, enabled the people of Fort McKay to access harvesting grounds throughout their Traditional Lands (FMFN 1994). In the winter, people were able to travel across the expansive frozen muskeg (peatlands) by foot and dog team and more recently snow machines. In the summer, people often traveled via the rivers to fishing and gathering grounds; upland areas were accessed by foot and horseback. Generally speaking, trails followed the paths of least resistance, using creeks, river valleys and lake shores when possible.

In the 1960s, fishing was still a widespread activity and played an important role in the Community’s culture and economy. Fish included in the traditional fisheries included arctic grayling, burbot, cisco, goldeye, lake trout, lake whitefish, longnose sucker, northern pike, walleye, white sucker and yellow perch. In addition to the commercial fishery that began on Lake Athabasca in the mid 1940s, the Namur (Buffalo) and Gardiner (Moose) Lakes area, the Athabasca River and its major tributaries, such as the Firebag River, continued to be a primary source to catch and dry fish for winter use (FMTA 1983: 91). Fishing camps were set up along these traditional locations to smoke and dry fish for human consumption, provide stores of dog food and bait for trapping furbearers (FRM 1998). Gatherings at summer fish camps along the Athabasca became hubs of social interaction and a place to pass on traditional skills, knowledge and where the next year’s harvest activities would be planned.

The role of berry picking in Aboriginal culture has been documented by scholars across Canada (McAvoy and Shirilla in CCLR 2005, Parlee et al. 2005, Thornton 2005, Emery 1998). The importance of berries and other boreal forest plants to the people of Fort McKay has been more specifically described in numerous EIAs (Appendix B), Community reports (FMFN 1994, Tanner et al. 2001, BG-TEK Consulting 2003, Fort McKay IRC 2010a) and regional documents (Dersch and Bush 2008). While important in terms of their medicinal and nutritional value, Fort McKay Community members also associate many social and cultural values with berries and berry harvesting. Dene and Cree people in the region have traditionally managed berry patches by selecting areas for harvesting, limiting harvest quantities and using fire to increase long term yields (HEG 2009: 37).



- Legend**
- Traditional Trail
  - Study Area
  - Fort McKay Forty
  - Township Study Area (FTSA)
  - Watercourse
  - Waterbody

**Figure 8-1**  
**Traditional Trail System**  
**of Fort McKay**

Produced By: J Blyth  
 Date: December 14, 2009  
 Data Sources: Government of Canada,  
 Fort McKay First Nation 1994

Stantec  
 11-2042 Mills Rd.  
 Sidney, British Columbia  
 V8L 5X4  
 Tel. (250) 656 7966  
 Fax. (250) 656 4789





The people of Fort McKay suggest that prior to and during the 1960s, berries were found and harvested “everywhere,” although most Community members recall picking berries in and around Fort McKay, on family Traplines, at traditional seasonal harvesting/gathering areas along the Athabasca River (such as Poplar Point and Tar Island) and around Moose (Gardiner) and Buffalo (Namur) lakes. The Traditional Land Use and Occupancy Study carried out by Fort McKay in 1994 maps berry harvesting areas throughout their Traditional Lands; the maps show parallels between intense berry harvest areas and important travel corridors such as the Athabasca River Corridor (including upstream sections of all major tributaries), the Legend-Namur-Gardiner-Sand-Eaglenest corridor and the McKay River (FMFN 1994: 26).

*People would gather (berries) mainly in July and August; we would go out when the berries were ready. There were berries everywhere. We used to go to Target Road over here and pick as a group. We went as 2-3 families and we would bring a lunch. We never had bridge in those days.*

(Fort McKay Workshop June 2009)

During the 1960s, berries continued to be harvested from July to September when the berries were ripe; some species (such as rosehips and some cranberries) would freeze on shrubs and be available through the winter. This prime gathering time corresponds to the time of year when families gathered in larger groups to fish during the summer months and for the fall hunt. While women oversaw the majority of the berry harvest planning and processing work (drying, preserving, stewing, making of jams and jellies), picking was a family affair, and often remembered as a time of laughter and good cheer.

*Tar Island near Suncor was an important (berry) gathering area for people; there were lots of blueberries and other berries – I remember it so clearly. In addition to fishing, we used to go duck hunting there; we would gather duck eggs. We survived on the land; we lived our life well. Today our children are lost. What is going to happen to them? Industry has not done us any good. It makes me very, very sad.*

(Fort McKay Workshop June 2009)

## 8.2 Cultural Values in the 1960s (Pre-Oil Sands Development)

In the 1960s, hunting, trapping, fishing and gathering (together referred to here as harvesting) were strongly associated with all the cultural values. Appendix B contains illustrations showing the relationships between various activities and cultural values in the 1960s and today.

### 8.2.1 Self-Reliance

Harvesting was directly linked to the value of self-reliance. “We didn’t have to rely on anything, anyone. Providing for ourselves made us proud” (Fort McKay Workshop 2008).

During the 1960s, berries continued to provide an important source of food and medicine throughout the year. Community members report picking large volumes of berries to eat fresh and store over the winter (FMES 1997, Tanner et al. 2001, FMFN 1994). In addition to being considered a healthy traditional food, berries and different parts of berry plants were commonly used as medicine. During the 1960s berries or berry products (jams/jellies) were also sold to non-community members or traded within the Community for other goods (FMFN 1994, FMTA 1983). Being able to provide healthy food and medicine for themselves strengthened the values of self reliance.

Fishing also ensured self-reliance. Fish was used for food, to feed work dogs and helped complement their income. “Between 1950s and 1960s they started commercial fishing. I used to fish at Gregoire Lake; the fish were good. We would smoke fish” (Fort McKay Workshop September 2008).

### 8.2.2 Rootedness

Harvesting is heavily dependent on healthy ecosystems. It is directly related to the value of rootedness. Aboriginal people experience sense of place in a very profound way. While sense of place supposes a separation between self and place that allows the self to appreciate the place, “rootedness” means being *part of* the place (Hay 1998). The bond between Aboriginal people, the plants, animals, landscape and local spirits is considered indissoluble and so land could not be bought or sold. What is more, the human/land link is timeless; it was established prior to birth and continues after death. It is frequently said of Aboriginal people “that they do not own the land, the land owns them” (Mercer 1995:130). Fort McKay Community members share that belief: “everything we had came from the land... We are people of the land. Without the land we feel lost. Without the land we are nothing” (Fort McKay Workshop 2008).

As a land based activity, berry picking depends on a healthy ecosystem. Family berry patches were often visited year after year and as such people/families often formed emotional, cultural and spiritual connections to these places through symbols, myths and memories. Thus the act of berry picking connected people to specific places and “the land” in general. “Everything was taught on the land - we identify places in our language” (Fort McKay Workshop September 2008).

As with other harvesting activities, fishing is heavily dependent on a healthy ecosystem and knowledge of the land, and thus value of Rootedness. In the traditional land use and occupancy study (FMFN 1994) ten species of fish are listed

as part of traditional harvests throughout the territory. People knew where different fish runs were and often employed different techniques depending on the location and time of year. “We used to fish the Athabasca and Rivers near Poplar Point – different families would fish different places.” “There are some places close by; and at Moose Lake and Long Lake, where people could trap (fish) in certain places.” “There; at the narrows, people could trap or use forked sticks and just throw them up on the banks” (Fort McKay Workshop June 2009).

### 8.2.3 Rhythm of Nature

Traditional life was organized in harmony with nature (rhythm of nature) through the seasonal round, where harvesting occupied a large part of the communities’ life in the yearly cycle. “Because we are a people who come from the land, it should not be surprising that our sense of time and our seasons should differ from those who have a different relationship to the land and a different form of economy” (FMTA 1983: 78). “People would start winter fishing around Christmas time and then after break up they would go out again. From the spring to the fall people used nets in the rivers and the lakes” (Fort McKay Workshop June 2009).

Berry harvest was one of the many traditional activities that depended on the time of year. Northern people dependant on berry harvests to supplement winter food stores are noted for their ability to interpret many of nature’s sign’s and signals (indicators) that help them to plan berry harvests (Parlee et al. 2005). Experienced berry pickers are cognizant of seasonal variability and able to predict the effect moisture, temperature and other environmental factors will have on berry crops. The value of “Rhythm of Nature” helped Fort McKay Community members decide where to go picking, and how much they should harvest (FMA 2007).

### 8.2.4 Cohesion, Bonding, Cooperation and Caring

Sharing strengthens the ties between Community members, promoting Community cohesion and caring within the kinship system: “A fundamental principle which guided Dene society was the concept of sharing responsibilities for the hunt and the products of its outcome ... When food, shelter, and so on was available to an individual, one had an obligation to distribute those goods in a prescribed manner within one’s own kin group. Conversely, when one’s kin had goods available, one had a claim to a set portion” (Coutu and Hoffman-Mercredi 2002: 59). In reference to berry gathering and distribution one Fort McKay elder recalled, “we would share with family and those that couldn’t go out picking” (Fort McKay Workshop, September 2008).

Although hunting and trapping were not necessarily conducted in groups, it required a high level of cooperation by family and Community members. Families worked together transporting meat and other body parts, preparing hides, butchering and smoking meat. These acts took a significant amount of cooperation

among family and Community members to process, distribute and store the harvest. The roles of all involved in the process were important and valued, reinforcing a sense of purpose to each individual. As well, the ongoing sharing of meat and other harvested items reinforces the concepts of caring and respect – both for the animal and for other Community members. All of these activities – from hunting to Community distribution of meat and other items – strengthens and solidifies the culture of the people of Fort McKay.

Seasonal fishing along the Athabasca brought people together and most recollections of fishing include extended families and the concept of working together: “Everyday I would get up and check the nets with my uncle... The nets need to be made – fixed. You have to haul the nets out of the river, sort the fish, make dry fish... Women would make dry fish,” (Fort McKay Workshop, June 2009).

In Fort McKay, berry picking was a group activity carried out with friends and extended family. As such, berry picking was one of the earliest ways in which young children became contributing members of the family. Elders use the activity of berry picking to pass on stories and the values of respect for the land and importance of cooperation and family cohesion.

### 8.2.5 Purpose

Harvesting time was also time often spent sharing stories and learning about relationships of people with their environment and the spiritual links with the creator. Through collectively working to provide for the family and to manage resources, and through the teachings of the Elders, the value of purpose was instilled in the entire group.

### 8.2.6 Peace and Connectedness

Harvesting, particularly berry picking, was seen as an activity related to harmony in nature and with the people around. “After hunting, we do a ceremony to give thanks and share, to be in peace” (Fort McKay Workshop 2008). “Picking berries gives you a good feeling. You are looking after yourself. You have quiet time to think... It matters to me that we can’t go picking. We used to have fun. There was bonding and that builds respect. It is healthy to be on the land. It is our exercise! We used to be busy” (Fort McKay Workshop September 2008).

“In the old days people were powerful. They used their own minds, they were close to Mother Earth, they didn’t use drugs or alcohol. Being on the land brings us close to our ancestors. We are better physically, mentally, emotionally” (Fort McKay Workshop 2008).

### 8.2.7 Tradition

“Hunting and fishing is addictive, you crave it. We are hunter-gatherers. It is inside of us. Eating traditional foods is part of who we are” (Fort McKay Work shop 2008). In that sense, harvesting has a strong relationship to tradition. Protocols associated with harvesting have a function of transferring knowledge and values from generation to generation.

Berry picking linked families and the Community together as individuals continue to recall berry-picking stories or the significance of their time together at traditional berry patches. Elders, aunts and uncles taught young people the values of life by telling stories of life in the bush and their history in the region as Aboriginal people. In Aboriginal culture storytelling served as a means to share vital lessons across generations about the relationship between plants, animals, and people, and the importance of maintaining relations of respect and reciprocity between humans and their world. As an important traditional food and medicine, knowledge associated with the harvest, preparation and use of berries occurred out on the land during berry picking excursions.

*Kids need to listen to the Elders to learn things properly – the protocols, how to get ready, how to clean up after. They need to know their culture. When I have gatherings I try and have traditional foods – now when there are community gatherings, the people don’t eat moose, fish – traditional foods. Traditional feasts always started with fish and berries.*

(Fort McKay Workshop, June 2009)

### 8.2.8 Respect and Self-Determination

“Back then hunting was to survive, feed families, there was an inherent respect in the process, for animals and for each other.” “[We] used to get everything from the land, for example moose hide for ropes, gloves... make moccasins... we didn’t waste anything; everything was used”. “[We] didn’t have to rely on anything, anyone. Providing for ourselves made us proud, spirit uplifted, self-esteemed” (Fort McKay Focus Group January 2009). Understandably, expert hunters gained considerable social respect for their abilities to provide for all Community members. Being able to plan berry harvests and, in some cases, burn to maintain berry patches helped to instill the value of self-determination. Youth were taught to respect the plants by leaving offerings and limiting the volume of berries picked so as not to over-harvest.

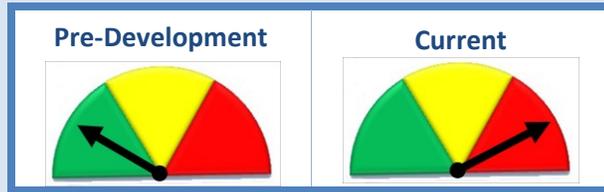
## 8.3 Industry Stressors Affecting Hunting, Trapping, Fishing and Gathering

Environmental and social effects resulting from oil sands development on Fort McKay's Traditional Lands have been well documented in numerous environmental impact assessments, Community reports, and regional research projects (*Appendix B*). The following descriptions of industry-caused stressors are derived from the perceptions and beliefs of Community members and from the Pre-Development and Current Case assessments in the Fort McKay Specific Environmental Assessment (Fort McKay IRC 2010b).

### 8.3.1 Current Oil Sands Developments within Fort McKay Traditional Lands

Activities and features related to oil sands development are key stressors on hunting, trapping, fishing and gathering through their effects on the air, land, water, animals and access. For mines, these activities and features include muskeg drainage, overburden dewatering and basal aquifer depressurizing, out-of-pit storage areas (i.e., tailings ponds), overburden dumps, mine pits, changes to natural drainage patterns, close-circuit operations during mining, drainage systems and pit lakes at the reclamation stage. For in-situ projects,

#### Box 8–1: Traditional Lands Disturbance



#### Indicator Summary

##### Stressor: Loss of land

Pre-Development disturbance in Fort McKay's Traditional Lands was about 800 ha. Currently, over 160,000 ha of land within Fort McKay's Traditional Lands is directly disturbed. More than half (67,000 ha) of disturbance occurs within a forty-township area that includes the hamlet of Fort McKay and many areas of high use and value to Fort McKay (e.g., Athabasca River corridor, Muskeg River). The main types of disturbance are oil sands development, seismic lines, pipelines, roads and well pads.

When tenured land - areas overlain by a lease, which is likely to be developed in the future - are included in this analysis of disturbance we see a further increase to 50% of Fort McKay's Traditional Lands being directly vulnerable to development.

Traditional land use maps [called Culturally Sensitive Ecosystem (CSE) maps (McKillop 2002, FMFN 1994)], show areas of intense, moderate and low traditional use for several resource harvesting activities - all traditional uses, large game harvesting, traditional plant harvesting (berries), fish, furbearers, and birds. Current disturbances range from 3 to 6% for each of these CSEs. However, disturbance disproportionately occurs in intense and moderate traditional use areas. For example, in the Large Game CSE, 81% of current disturbance is within the intense use area. For traditional plant harvesting (berries) about 50% of the disturbance is within the moderate use CSE and another 25% occurs within the intense use CSE.

While all impacts on land and access are considered significant, those on Traps, near the Community and in intense and moderate traditional use areas are considered more severe. Any amount of land disturbance are considered significant adverse effects on Fort McKay's traditional land use opportunities and ability to exercise their Treaty and aboriginal rights. Hence, these effects are not rated using a numeric rating system and instead are rated qualitatively. Therefore, the gauge is in the red zone, and Fort McKay believes that significant mitigation and accommodation is required.

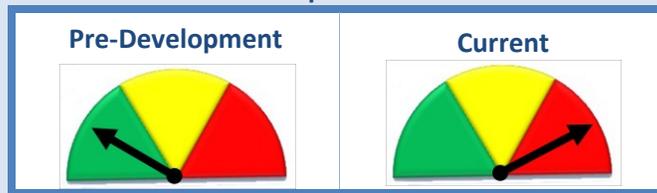
activities and features include muskeg drainage, wellpads, above-ground pipelines, plant sites, water and wastewater disposal wells, landfills, and reclamation. Both types of oil sands development also have associated infrastructure including roads, pipelines and transmission lines.

The number of existing and approved oil sands projects in the area is itself a stressor. Current operating and approved oil sands projects within Fort McKay's Traditional Lands include: Suncor – Firebag In-situ Project, Steepbank and Millennium Mines and Voyageur Upgrader; Shell Albion Sands Muskeg River Mine and Expansion and Jackpine Mine Phase 1; Canadian Natural Resources Limited– Horizon Project; Husky – Sunrise Thermal Project; Imperial – Kearl Oil Sands Project; Petro-Canada – Fort Hills Project and MacKay River Project; Syncrude – Aurora North, Mildred Lake; Total – Joslyn SAGD. Timing of various activities for each project is a compounding factor in cumulative effects.

### 8.3.2 Land Disturbance

In the early 1980s, Fort McKay declared that “It is impossible for us to continue to withdraw and still have enough land to serve as an economic base for us in the ways that we choose. This is particularly clear in the case of the traplines” (FMTA 1983:

Box 8–2: Trapline Disturbance



#### Indicator Summary

##### Stressor: Loss of land

Fort McKay community members hold 29 Registered Fur Management Areas (also referred to as Traplines; Figure 8-2). While people are on the land trapping they and their extended families also participate in other traditional activities so much of a family's traditional land use may occur within Trapline areas. Therefore, disturbance effects at the Trapline-scale are important to document and assess.

With existing and approved developments in place more than 113,000 ha (about 12%) of direct disturbance occurs within Fort McKay member registered Traplines. When tenured leases, which are likely to be developed in the future are included, up to 82% of Fort McKay community members Traplines are vulnerable to development.

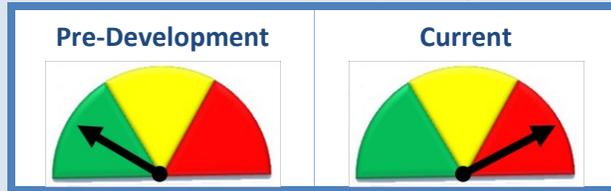
In addition, there are other impacts to Traplines including noise, dust, odours, traffic, wildlife population and habitat loss (see Boxes 8-17 to 20), increased numbers of people on the land (see Box 10-3) and constant changes in access (see Boxes 8-7 and 8-8).

While there are processes in place to provide individual trapper compensation for adverse effects on Traplines, this does not address the cumulative effects of development on Fort McKay's access to traditional resources, way of life and culture. Any amount of land disturbance and any impediments to access are considered significant adverse effects on Fort McKay's traditional land use opportunities and ability to exercise their Treaty and aboriginal rights. Hence, these effects are not rated using a numeric rating system and instead are rated qualitatively. Due to the loss of Traplines (12%), on-going impacts and access issues and the potential for further disturbance (up to 82%), the gauge is in the red zone, meaning that the current situation is significantly adversely affecting Traplines and associated traditional land use.

34). Since that time there have been a number of major projects approved within Fort McKay's Traditional Lands, particularly near the Athabasca River. Today, as shown in Box 8-1, about 131,000 has been disturbed directly by industrial development, about half (67,000 ha) of this disturbance is within a 40 township area<sup>7</sup> around the community. The main types of disturbance are oil sands development, seismic lines, pipelines, roads and well pads. Fort McKay's opportunities for traditional land use are affected by a combination of direct disturbance, loss of access and the cumulative effects of linear disturbances (see Section 8.3.3 for further discussion).

Twenty-nine (29) Registered Fur Management Areas (RFMA, also referred to as Traplines) are registered to Fort McKay community members and these cover about a quarter of Fort McKay's Traditional Lands (Box 8-2; Figure 8-2). The Trapline system influences, to some extent, where Fort McKay's traditional activities take place. Trapping is one activity that is essentially restricted to an individual and their extended family's RFMA. While people are out

### Box 8-3: Wetlands (Muskeg)



#### Indicator Summary

##### Stressor: Loss of Land

Wetlands are integral to Fort McKay's culture and support many key traditional resources, including traditional plants.

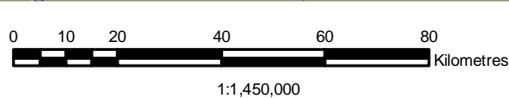
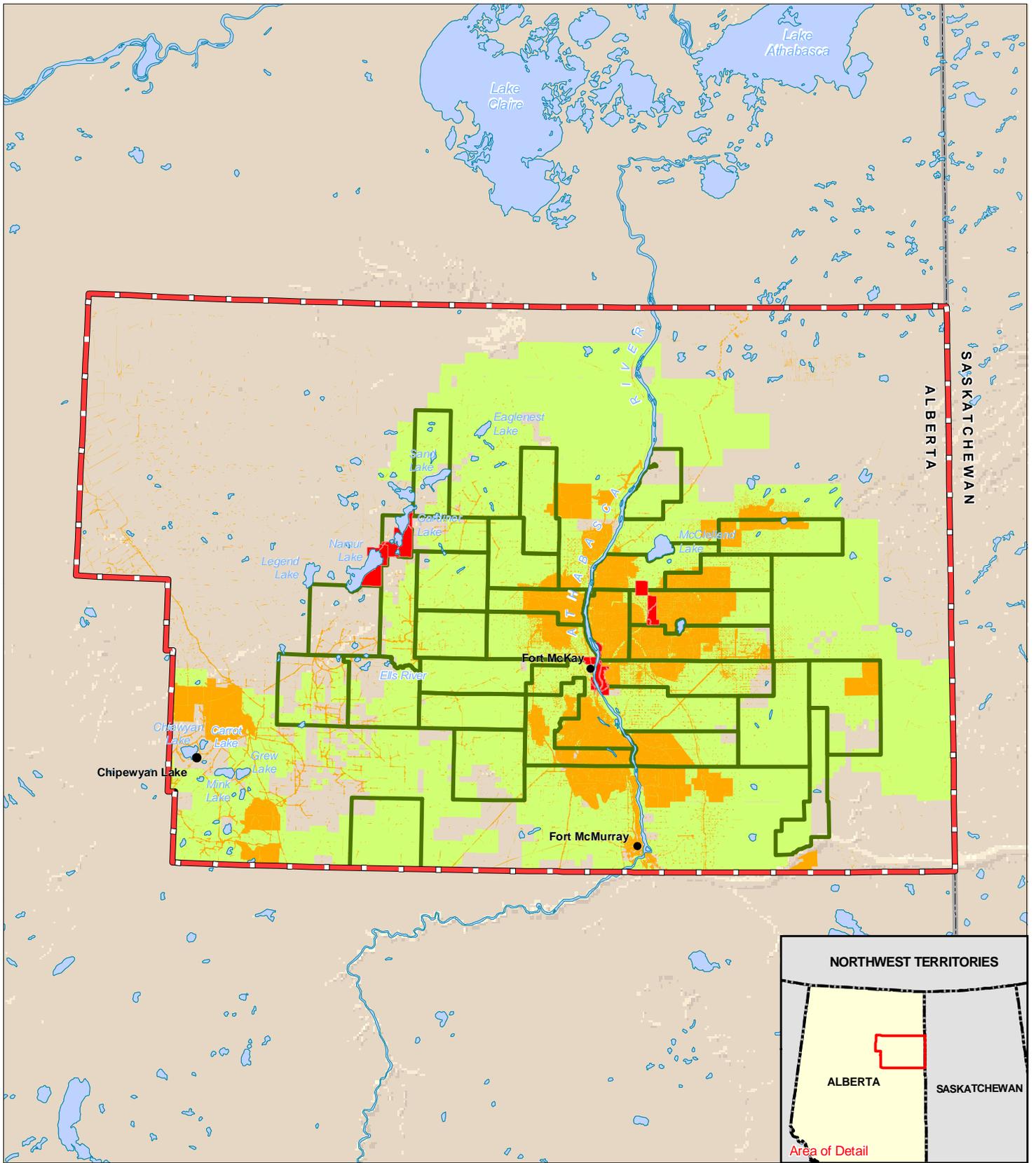
Wetlands covered 171,493 ha (45%) of the Forty Township Study Area (FTSA) prior to 1960. Currently, wetland cover is reduced to 126,789 ha (33%) of the FTSA. This represents a 26% reduction in the areas covered by wetland vegetation between the 1960s and 2007.

When development in 2007 was compared to development in the late 1990s it was found that in this 10-year period there were decreases ranging from 23 to 27% in the area of peatlands, old growth, timber productive forests, riparian area and high rare plant potential. Losses of wetlands and wetland indicators above 20% are classified as significant adverse effects of high environmental consequence, hence the gauge in the red zone.

For details see: Section 7, Fort McKay Specific Environmental Assessment (Fort McKay IRC 2010b)

<sup>7</sup> This 40 township study area (FTSA) is used in the assessment of terrestrial resources in the Environmental Specific Assessment. It is located adjacent to the Athabasca River and includes the area approximately 17 km south of Fort McKay and 61 north of the Community, an area in which the majority of oil sands development occurs. The FTSA (379,641 ha) is bounded by the following: Townships 93 to 100, Ranges 8 to 12, W4M). The FTSA is considered as a regional-scale study area in this Fort McKay Specific Assessment. The Shell LSAs represent about 13.3% of the land within the FTSA and approximately 2.2% of the RSA of 2,277,376 ha used by Shell (2007) in the EIA for the proposed Projects. The FTSA is intended to provide detailed vegetation information for land centered on the Community of Fort McKay for use in the assessment of the effects of the proposed Projects on vegetation.

The study area includes the Community of Fort McKay, straddles the Athabasca River and includes the lower portions of the MacKay River, Ells River, Joslyn Creek, Tar River, Calumet River, Pierre River, Asphalt Creek, Gymundson Creek, Big Creek, Firebag River, Fort Creek and Muskeg River watersheds. As a result, the FTSA study area encompasses many areas of high value and use by Fort McKay (Healing the Earth Strategy, Fort McKay IRC 2010a). For details on this study area see the FMSA Introduction, Section 1.6.1.3.



**Legend**

-  Study Area
-  Tenure Land
-  Planned Development Case
-  Fort McKay Trapline Ownership
-  Fort MacKay Reserve
-  Waterbody

**Figure 8-2:**  
**Planned and Potential Development Disturbances within Fort McKay's Traditional Lands and Traplines**

Produced By: J Blyth  
 Date: November 3, 2009  
 Data Sources: Government of Canada,  
 Fort McKay First Nation, McKillop

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**Stantec**

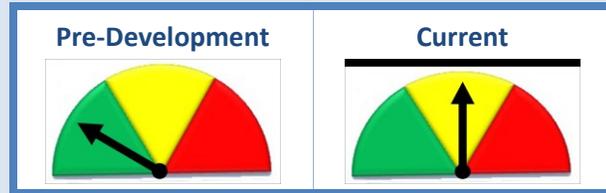


on the land trapping they also participate in other traditional activities. Hence, much of individual family's traditional activity may occur within their Trapline. Therefore, disturbance effects at the Trapline scale are important to document and assess. Currently, about 12% Fort McKay's Traplines are directly disturbed by industrial development. When tenured leases are taken into account, about 82% of this land is vulnerable to development. Impacts on Traplines have been particularly acute for these Community Members who have lost their entire Traplines.

While the RFMA system does influence where traditional activities take place, traditional land use is not restricted to Trapline areas and the Community as a whole use various areas within their Traditional Lands at particular times of the year. Fort McKay analyzed their traditional land use data to reveal locations where high density land use occurs (these areas are referred to as Culturally Sensitive Ecosystem (CSE) as per McKillop 2002 and FMFN 1994). CSEs show areas of Intense, Moderate and Low traditional use for all traditional uses, large game harvesting, traditional plant harvesting (berries), fish, furbearers, and birds. Current disturbances range from 3% to 6% for each of these CSEs. However, disturbance disproportionately occurs in Intense and Moderate traditional use areas. This varies depending on the specific harvesting area. For example, land in the "All Traditional Uses CSE" has experienced disturbance in 14% of the Intense Use category and 8% of the Moderate use category. Disturbance is discussed in more detail in [Section 9](#) of the Fort McKay Specific Environmental Assessment.

A regional study carried out to identify traditionally used plants in the Regional Municipality of Wood Buffalo found that the Fort McKay First Nation has experienced significant losses of plant collection areas and are often disappointed when returning to a plant collection site to find it destroyed by development (Dersch and Bush 2008:14). Many of the traditional berry gathering areas on family

#### Box 8-4: Upland Forest



#### Indicator Summary

##### Stressor: Loss of Land

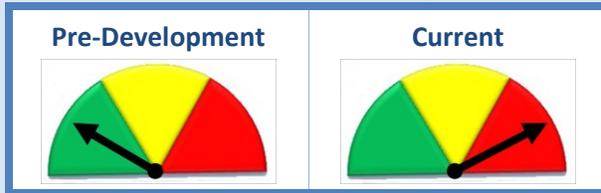
Upland forests support many of the key traditional resources important to Fort McKay.

Uplands covered approximately 158,166 ha (42%) of the land area in the Forty Township Study Area at Pre-Development (FTSA). Currently, upland land cover is reduced to 138,907 ha (37%) of the land area in the FTSA. This represents a 12.2% reduction in the areas covered by upland vegetation between 1960 and 2007.

When development in 2007 was compared to development in the late 1990s it was found that in this 10-year period there were decreases ranging from 5 to 16% in the area of, timber productive forest, riparian areas, moderate rare plant potential and old growth indicators. Losses of uplands and upland indicators above between 10 and 20% are classified as possibly significantly adverse effects of moderate environmental consequence, hence the gauge in the yellow zone.

For details see: [Section 7](#), Fort McKay Specific Environmental Assessment (Fort McKay IRC 2010b)

**Box 8–5: Biodiversity**



**Indicator Summary**

**Stressor: Loss of Land**

Biodiversity is important to Fort McKay because it reflects the integrity of the landscape and ecosystems that support Fort McKay’s traditional activities. The biodiversity assessment assessed changes in biodiversity at the ecosystem level (biodiversity potential) and at the landscape level (distribution and make-up of landscape “types”).

At the ecosystem level, lands ranked with high biodiversity potential have decreased in the Forty Township Study Area by 26% between 1960 and 2007. Moderate biodiversity potential areas have decreased by about 20% since 1960, while low biodiversity potential areas have decreased by 10%.

At the landscape level, upland (12%) and wetland cover classes (26%) have both decreased. As well, the landscape has been fragmented; the number of “patches” (areas surrounded by disturbance) in the FTSA has increased. The patch size has decreased which means that there are more areas are experiencing disturbance.

Changes in biodiversity greater than 20% are considered to be significant and adverse, hence the gauge in the red zone– this includes ecosystem level biodiversity and landscape level effects on wetlands. (Landscape level effects on uplands are in the yellow zone.)

For details see: Section 8, Fort McKay Specific Environmental Assessment (Fort McKay IRC 2010b)

Traplines and along the Athabasca, Steepbank, Muskeg, Firebag, Marguerite, McKay, Dover, Ells, Pierre and Redclay creeks and rivers have been lost or altered as a result of oil sands development. Impacts to both upland and wetland areas have a profound influence on harvesting opportunities. There is both a direct loss of vegetation for harvest (i.e., food plants and medicine) as well as a loss of animal habitat which compounds the loss to traditional harvesting opportunities. See Boxes 8–3 through 8–5 for an indicator summary of the state of wetlands, uplands and overall biodiversity assessed in Sections 7 and 8 of the Fort McKay Specific Environmental Assessment. Loss of traditional berry picking sites is not only occurring at mine sites, but also as a result of project related infrastructure since many roads, pipelines, power lines and work camps associated with oil sands development are built on the high sandy ridges that support productive berry habitats. Reduced water levels associated with industrial use, removal of muskeg, road construction and other industry driven water diversions are also affecting some berry habitats.

*Today all the berries dry up before they ripen. Berries grow better where they are protected in the bush.*

(FMFN 1994: 67)

*There used to be lots of berries – everywhere. Right here in McKay there used to be berries – blueberries, saskatoons, cranberries.... Now – nothing.*

(Fort McKay Workshop January 2009)

*Blueberries are scarce now around McKay. All kids do now is go quadding around - kids don't have a relationship (with the land) now.*

(Fort McKay Workshop September 2008)

Box 8–6 shows the impacts to development on the “traditional plant potential” of a site and an overall indicator of status of impacts to traditional plant potential.

Traditional plant potential refers to the estimated ability of an area to support plants that are significant for cultural purposes. This analysis is places strong weighting on berry producing species. See Section 7 of the Fort McKay Specific Environmental Assessment for details of this analysis.

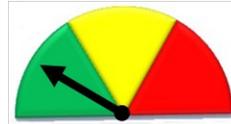
It has become increasingly difficult for Community members to find plant (and berry) collection areas that are believed to be uncontaminated and suitable for consumption (Dersch and Bush 2008: 14) and many of the traditional collecting areas have been lost or are inaccessible to Community members. The collecting areas for the Fort McKay people have been narrowed to a small area along the Athabasca River (considered too polluted for berry picking by many Community members), major tributaries that are accessible by boat, and the Birch Mountains area, which remains relatively undeveloped.

Because of oil sands development, the Community believes that living a subsistence lifestyle is no longer an option.

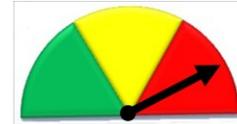
*The industries will not be here forever. Then what? Who is going to teach them the trails - where to go? The landscape has changed. Now there are hills where there were none before. Trails have moved. I don't know how to get to my own trap line. (Fort McKay Workshop 2008)*

### Box 8-6: Traditional Plants

#### Pre-Development



#### Current



#### Indicator Summary

##### Stressor: Loss of Land

The harvesting of traditional plants is a key traditional use activity of Fort McKay. The traditional plant assessment looked at areas of “traditional plant potential” as well as at some specific Fort McKay berry harvesting sites.

Prior to oil sands development (1960s) the traditional plant potential in the Forty Township Study Area (FTSA) was as follows: high (30%), moderate (46%), and low (23%). As of 2007 the proportion of high plant potential areas decreased from 30% to 27% and moderate potential areas decreased from 46% to 29%. In contrast, areas ranked with low potential to contain traditional use plants increased from 23% at Pre-Development to 44% in the Base Case, due to the increase in area of disturbed land (which are ranked as having low plant potential).

114 traditional use berry sites, were documented within the FTSA (FMFN 1994). 53 of these berry sites (46%) have been lost as of 2007. Fort McKay considers these losses permanent since specific sites can not be replaced by reclamation.

The permanent losses of berry sites and the combined losses of high and moderate traditional plant potential are considered significant and adverse, hence the gauge in the red zone.

For details see: Section 7, Fort McKay Specific Environmental Assessment (Fort McKay IRC 2010b).

*Now everything is gone and it's hard to accept, but what can you do? You are forced to walk away. The Land will never be the same.*

*(Fort McKay Workshop 2008)*

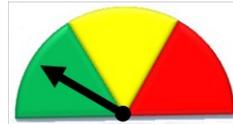
### 8.3.3 Access to the Land

Access to land upon which to conduct traditional activities has been adversely affected in a number of ways. First, there is the availability of land upon which to conduct traditional uses. Direct land disturbance has been discussed previously in Section 8.3.2 and Boxes 8-1 and 8-2. Direct land disturbance quantifies the actual loss of vegetation and/or soil by industrial development, including linear disturbance but it does not account for other affects of linear disturbance. As shown in Figure 8-2 the spatial extent of disturbance is large, with most areas of Fort McKay's Traditional Lands being influenced by linear developments. The effects of linear developments have not been fully assessed within Fort McKay's Traditional Lands but the quality and integrity of resources can be influenced by linear density (e.g., wetlands flow can be affected by roads, biodiversity can be affected by fragmentation of the landscape; see Box 8-7).

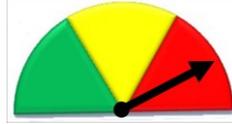
A second aspect of access to the land is related to a decrease in the quality of resources, for example potential impacts on vegetation from air emissions (as discussed in Box 8-13) and water quality from muskeg drainage and seepage of process-affected water. Perception of risk associated with pollution can also affect access to the land due to concerns about environmental and food quality as discussed below in Section 8.3.4.

#### Box 8-7: Linear Development

##### Pre-Development



##### Current



#### Indicator Summary

##### Stressor: Access to Land

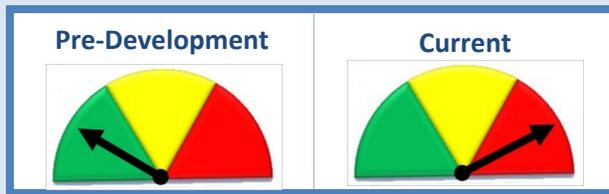
Prior to oil sands development linear developments were limited to Highway 63 and a few forestry roads and cut lines. Currently, as shown in Figure 8-1, most areas of Fort McKay's Traditional Lands being are influenced by linear developments.

The effects of linear development have not been fully assessed within Fort McKay's Traditional Lands. However, scenario modeling done for the Regional Municipality of Wood Buffalo indicates that several ecological indicators are sensitive to the influence of linear developments, in particular moose, black bear and fish (SEWG 2008). This is mainly due to increase in access and associated hunting and fishing pressure (SEWG 2008).

Linear developments also influence the integrity of the landscape, for example, roads can alter wetland flow patterns, and biodiversity is affected by fragmentation of the landscape (See Box 8-5). The volume of seismic lines and changing road patterns associated with industrial development can result in confusion, frustration and impediments to Fort McKay's access of the resources that are remaining.

Due the impacts of linear development on Fort McKay's access, on key resources of interest to Fort McKay (i.e., fish, moose, bear, wetlands), the lack of comprehensive regional information on the effects of linear development, the lack of comprehensive access management plans, and feedback from Community members during the development of the CHA Baseline report Fort McKay considers the effects of linear development to be a significant issue; hence, the gauge is in the red zone.

## Box 8-8: Traditional Trails



## Indicator Summary

**Stressor: Access to Land**

Fort McKay documented a number of its traditional trails in *There is Still Survival Out There* (FMFN 1994). Prior to oil sands development there were about 1,343 km of traditional trails within the Forty Township Study Area. Currently, about 320 km of these trails have been disturbed due to development, a 24% loss.

Not only is the area of directly disturbed trail unusable, but if trails are missing large sections it may render the rest of the trail unusable. So the loss estimate of 24%, in terms of opportunity for use of the traditional trail system, is conservative. Fort McKay considers this loss to be significant; hence the gauge is in the red zone.

For details see Section 9, Fort McKay Specific Environmental Assessment (Fort McKay IRC 2010b)

Physical impediment is a third aspect of access. Access onto or through active oil sands project areas has been limited by industry for safety or other reasons. Within project lease areas, access to traditional hunting, fishing, trapping and gathering areas may be hindered by gates or other restrictions. Access through industrial leases is possible but it often means checking in with security, obtaining permission and sometimes having to be escorted across mine sites. This can lead to delay and frustration and real obstacles to access the remaining resources.

*“They [industry] blocked us. No fishing, no hunting, nowhere to go”*

(Fort McKay Workshop June 2009).

*To go to Moose Lake you need a plane; to go to Clearwater you need an outboard motor. Now you need to go a long ways to go fishing...that's money.*

(Fort McKay Workshop June 2009)

*Companies are really locking things up... long waits and gates to cross lease areas.*

(Fort McKay Workshop 2008)

*Now we need permission to go onto our trap lines.*

(Fort McKay Workshop 2008)

A fourth aspect of access is related to loss of traditional trails (see Figure 8-1). An analysis of traditional trails shows that within a forty township area surrounding the Community, 24% of these trails have been lost to development. As well, since developments surround the Community, the loss of a portion of a trail can result in the linkage being lost between the Community and the particular harvesting areas (see Box 8-8). The loss of traditional trails and the number of seismic lines and changing road patterns associated with industrial development can result in confusion, frustration and impediments to access the remaining resources.

A fifth aspect of access is changing land use patterns, and the subsequent fast pace adaptation required of Community members. There are so many different linear disturbances that it becomes confusing to find one's way through the maze of roads, trails, seismic lines, and rights-of-way. Industrial activities are often associated with changing road patterns; for example, the Canterra Road, which heads northeast through the Muskeg River watershed and has been in use for several decades is currently being moved due to a mine development.

A sixth aspect of access is that the high volume of seismic lines and industrial access roads through crown land open up the remaining traditional harvesting areas to non-Aboriginal (as well as Aboriginal) hunters. This increases competition for game and fish and has led to conflict and property damage (see Box 10–3).

These increased number of non-community members using the land, often as a result of increased access, has affected, for example, berry picking for some Community members. As the late elder Alice Boucher shared:

*There are too many white people, we can't even go berry picking; women are scared to go by themselves*

(FMFN 1994: 60)

### 8.3.4 Air, Land, Water and Traditional Food Quality

Community members worry about the effect industrial pollution is having on wildlife health, and thus the quality of wild meat, fish and berries. This deters some individuals from harvesting activities near the Community. The perceived need to travel further distances and the related cost also discourage some individuals from harvesting activities:

*We don't eat moose anymore for what they eat and the pollution*

(Fort McKay Workshop 2008)

*You have to go way out into the mountains to hunt. I don't eat anything from around here.*

(Fort McKay Workshop 2008)

*Now we have to travel to get what we need and travel costs money*

(Fort McKay Workshop 2008)

Industrial emissions and wastewater discharges are a continuing source of concern for Community members. Concerns related to water quality, fish health and water levels have been documented in numerous EIAs ([Appendix B](#)) and Community documents (FMFTA1983; FMFN 1994; Tanner et al 2001).

Community members have long noted concern about the direct loss of fishing sites due to development as well as in-direct pollution effects on fish habitat. In addition to regional lakes and tributaries, there were traditional fishing spots along the

Athabasca from Fort McMurray to Fort Chipewyan before industry moved into the area in the early 1960s (FRM 1998).

In some cases, oil sands development has destroyed traditional fishing camps; for example the camps at Tar Island and at the “bridge to nowhere.” “People used to stay in the bush along the [Athabasca] River from [Fort McKay] to Fort McMurray. People stayed in tents and fished all along there. Now today, nobody can do that” (Fort McKay Workshop June 2009)

Not only has there been a loss of fishing locations, concern about pollution effects at many remaining sites has caused people to shift their fishing practices.

*We won't eat fish from the Athabasca. The pollution in the river ended all fishing on the Athabasca.*

(Fort McKay Workshop June 2009)

As one elder shared, “too much oil, from plants in the river so everything is spoiled...that part of our tradition has been taken away from us by industry” (FRM 1998: 34). Traditional fishing areas such as Namur (Buffalo) and Gardiner (Moose) Lakes have become even more valued due to their distance from industrial development.

Community concerns related to emissions from oil sand upgraders, mine fleets and the dust and emissions associated with industrial vehicle use in mine areas and along highways, roads and access trails have been documented in numerous EIAs ([Appendix B](#)), Community reports (FMTA 1983; FMFN 1994; BG-TEK 2003) and regional documents (Golder Associates 2002; HEG 2006; Dersch and Bush 2008). In all these reports, Community members suggest that since the 1960s there has been a significant change in the availability and quality of berries growing in

throughout the Traditional Lands, which they believe can be attributed to industrial pollution. While some people will pick berries locally, others in the Community say that they have changed their berry picking locations and now travel hundreds of kilometres to find berries that are not “covered in white powder and black specks” (FMES Ltd and AGRA 1998: 21).

*We used to pick tons of blueberries; we would pick lots and store them for the winter. But now there is nothing around here in this country. We get blueberries from the places where it is not so polluted. We used to have all kinds of berries - saskatoons, pinch berries, and blueberries. Ever since there has been all this industry there is absolutely nothing. Nothing is growing here. It has something to do with the industrial plants. It's the pollution coming out of the stacks.*

(Fort McKay Workshop June 2009).

Many Community members believe that changes to air quality in these areas are having an impact on human as well as environmental health, which is affecting their

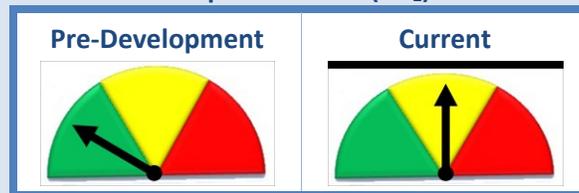
quality of life and enjoyment and use of the land. These concerns relate to air quality not only in the community of Fort McKay, but also on and adjacent to the community's Traditional Lands.

Fort McKay's air quality has been adversely impacted by existing regional oil sands air emissions as evidenced by continuous air quality monitoring data. Currently, air quality in Fort McKay is generally only affected by regional industrial emissions - particularly when the wind is from the southwest to southeast (influence from Syncrude and Suncor) and from the northeast (influence from Syncrude Aurora North and Albion). Two polluting compounds are of particular concern - sulphur dioxide and nitrogen oxides. Boxes 8-9 through 8-10 summarize the status of indicators of these two compounds, as derived from the Fort McKay Specific Environmental Assessment.

The Community frequently perceives detectable levels of odour. These odours not only affect quality of life in the Community, they also raise concerns regarding the possible health effects associated with these air contaminants. These concerns have been heightened by periodic extreme odour events in the Community that have made people ill. For example, Syncrude's flue gas desulphurization start-up problems in the spring of 2006 and a recent Syncrude diverter stack use event both resulted in severe odours in Fort McKay. In particular, the 2006 event resulted in some students being hospitalized.

Odours are also prevalent in many areas of Fort McKay's Traditional Lands, generally near development sites. The smell (even if periodic) acts as a constant reminder that the environment is not pristine and that degree of pollution is

#### Box 8-9: Air Quality Parameters – Sulphur Dioxide (SO<sub>2</sub>)



#### Indicator Summary

##### Stressor: Pollution

Sulphur dioxide (SO<sub>2</sub>) emissions are principally associated with the combustion (burning) of sulphur-containing fuels such as coke and some diesel fuels, but are also associated with sulphur recovery processes.

1960s SO<sub>2</sub> levels in Fort McKay were predicted by modeling to be very low. SO<sub>2</sub> levels have increased substantially since pre-development. However, current levels are generally below Fort McKay's Human Health and Keeping Clean Areas Clean criteria/targets. However there are some periodic high levels, where Fort McKay's 24-Hour Healing the Earth Strategy criteria have been exceeded.

Regional SO<sub>2</sub> emissions have generally been decreasing and will decrease further as sulphur emission controls are applied to large sulphur emission sources. However, this trend could reverse if alternate fuels with high sulphur content, such as coke, bitumen, asphaltene, produced gas and refinery fuel gas, replace natural gas.

Fort McKay's does have a concern with upset or operational conditions that result in periodic high SO<sub>2</sub> levels in the Community. The gauge is in the yellow zone to indicate that although regional levels of SO<sub>2</sub> are decreasing that there is an issue that needs to be addressed.

For details see: Section 2.3, Fort McKay Specific Environmental Assessment (Fort McKay IRC 2010b)

occurring (see Box 8–11). In the 1960s, odours in the Community of Fort McKay were associated with natural environmental cycles such as spring and fall, Community activities such as wood burning, meat/fish smoking and cooking as well as occasionally forest fires. Currently, the Community is subject to hydrocarbon and sulphur-based odourous compounds from oil sands operations. Currently, odours from oil sands operations significantly affect the quality of life in the Community and the use and enjoyment of activities on its Traditional Lands.

In turn, this results in (Dr. John Dennis, pers. comm. 2009):

- elevated stress that environmental pollution is occurring
- odours offer constant intermittent reminders that individual and family group can be exposed at any time and in any place ... including the safety of within a home or out on the land
- understanding that the environment (and the wildlife and plants it supports) is being polluted to a greater or lesser degree
- feelings of helplessness: industrial pollution exposing humans and the environment is beyond the control of Community Members

Industrial air emissions have the potential to adversely impact vegetation and terrestrial ecosystems directly through soil and surface water acidification (Fenn et al. 1998, Reuss and Johnson 1986) and through eutrophication (high levels of fertilization; Fenn et al. 2003). Fort McKay is concerned that areas that are not

### Box 8-10: Air Quality Parameters – Nitrogen Oxides (NO<sub>x</sub>)



#### Indicator Summary

##### Stressor: Pollution

There are a large number of Nitrogen Oxides (NO<sub>x</sub>) sources in the region including mine fleets (major source), boilers, heaters, gas turbines, traffic and to a lesser extent household heating. Potential effects of NO<sub>x</sub> emissions include human health effects associated with NO<sub>2</sub> in the air; ozone (O<sub>3</sub>), which is formed from NO<sub>2</sub>; and fine particles (PM<sub>2.5</sub>), which NO and NO<sub>2</sub> can contribute to. Potential environmental effects of NO<sub>x</sub> are discussed in Box 8-13.

Pre-Development NO<sub>2</sub> levels in Fort McKay were predicted by modeling to be relatively low and associated with community activities such as wood burning as well as some background level from upwind sources.

NO<sub>2</sub> levels have increased substantially above 1960s levels as a result of regional developments. Current NO<sub>2</sub> levels in Fort McKay are below Fort McKay's Air Quality Health Criteria and Keeping Clean Areas Clean air quality targets. However statistical analyses show a trend of increasing NO<sub>2</sub> levels over the past 10 years.

Fort McKay rates this issue within the green zone of the gauge but approaching the yellow, since there is a trend of increasing levels that needs to be addressed.

For details see Section 2.0 and Appendix 2-1, Fort McKay Specific Environmental Assessment (Fort McKay IRC 2010b).

directly impacted by land disturbance may be subject to air pollution related impacts (see Boxes 8-12 and 8-13).

### 8.3.5 Rivers, Streams and Groundwater

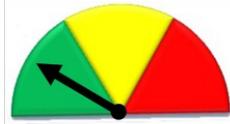
By 2008, as noted above, 18% of the Traditional Lands within a 40 township area surrounding Fort McKay have been disturbed by industrial development. Part of this disturbance has been changes to the surface and ground water regimes that feed these lands. The streams and rivers are the basis for the much of the wildlife habitat that made these lands productive and provided a sustainable way of life for thousands of years. Five Athabasca River tributaries and their watersheds are assessed by Fort McKay to be 'threatened' (See Box 8-14). As well, the Athabasca River itself, is currently assessed by Fort McKay as 'threatened', based on the potential for current and approved oil sands developments to affect the river, especially during winter when flows are lowest and fish habitat is most vulnerable (see Box 8-15). Ongoing monitoring and

watershed management is critical to these essential resources to ensure that impacts to watersheds, the habitat they support and ultimately traditional land use opportunities are not further affected with increasing development.

The impacts on groundwater are also important for hunting, trapping, fishing and gathering. The Community has always made direct and indirect use of the groundwater resources during traditional pursuits. Direct use of groundwater occurs at places where Community members spend time, including on Traplins, at cabins or simply spending time on the land. Groundwater may be obtained from muskegs, springs and, during the winter, from groundwater that has been discharged as surface water body base flow. Indirect use of groundwater occurs

#### Box 8-11: Odours

##### Pre-Development



##### Current



#### Indicator Summary

##### Stressor: Pollution

In the 1960's, odours in the Community of Fort McKay were associated with natural environmental cycles such as spring and fall, Community activities such as wood burning, meat/fish smoking and cooking as well as occasionally forest fires.

Currently, the Community is subject to hydrocarbon and sulphur-based odourous compounds from oil sands operations. The experience of Fort McKay community members is that odours occur in the Community on a regular basis (i.e., several times a week). A comparison of air quality monitoring data<sup>1</sup> for Fort McKay to World Health Organization odour-based air quality thresholds indicates that Fort McKay is at times subject to high hydrocarbon and particularly reduced sulfur levels that are above threshold odour levels and on occasion at nuisance odour levels. Currently, odours from oil sands operations significantly affect the quality of life in the Community and the use and enjoyment of activities on its Traditional Lands and are rated in the red zone of the gauge.

For details see Section 2.4, Fort McKay Specific Environmental Assessment (Fort McKay IRC 2010b).

<sup>1</sup>Data are from 1998 to 2007; sources include Wood Buffalo Environmental Association (WBEA), the Clean Air Strategic Alliance (CASA) Data Warehouse and Shell 2007.

where traditional activities such as gathering take place and the vegetation at the gathering sites (e.g., fens) is dependent on groundwater for survival. As shown in Box 8-16, the groundwater concerns within Fort McKay's Traditional Lands include loss of groundwater aquifers due to mining; drawdown of shallow groundwater from mine dewatering and SAGD activities, which in turn affects fens; and the potential for seepage of process-affected water from tailings ponds into the groundwater system and eventually to surface water.

### 8.3.6 Industry has Affected the Animals

The increased noise, traffic and population in the region associated with oil sands development have caused habituation of animals traditionally hunted by the people of Fort McKay and modified the way in which people hunt. This habituation changes animal behaviour patterns therefore modifying Community reliance of traditional knowledge and traditional skills.

*Long ago, moose were smart. To hunt a moose you had to be alert... Today, moose stand on the road and stare at the cars and trucks passing by. It is boring hunting for moose. They are not scared anymore: they are used to people now.*

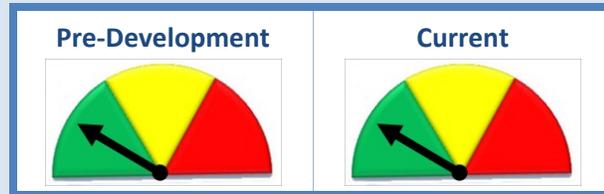
(Fort McKay Workshop 2008)

Many Community members also feel that industry has driven smaller animals and birds away.

*There used to be so many porcupines, skunks, all kinds of animals – now nothing. I don't know why – the pollution I guess.*

(On the Way to Moose Lake 2002)

#### Box 8-12: Air Quality Indicators – Particulate Matter PM<sub>2.5</sub>



#### Indicator Summary

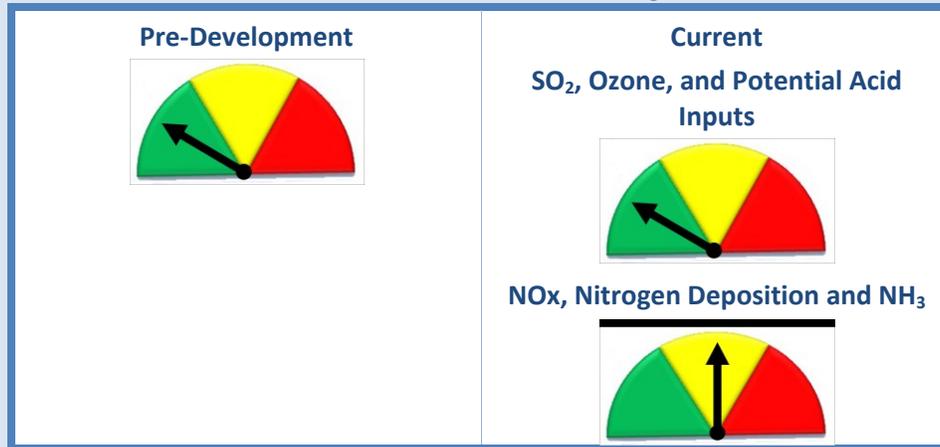
##### Stressor: Pollution

Particulate matter (PM<sub>2.5</sub>) emissions are associated with the combustion of some fuels in vehicles, boilers, heaters, turbines and process units and dust from construction and mining operations (primary PM<sub>2.5</sub>). PM<sub>2.5</sub> is also formed in the atmosphere from water vapour and various sulphur, nitrogen and hydrocarbon compounds (secondary PM<sub>2.5</sub>).

In the absence of industrial development, ambient PM<sub>2.5</sub> levels in Fort McKay would be expected to be relatively low and primarily associated with community or residential activities such as wood burning, forest fires as well as some background level from upwind sources. In general, PM<sub>2.5</sub> levels in the Community have increased from 1960s levels. Interpretation of PM<sub>2.5</sub> data is complicated by natural sources that can result in high levels for significant periods of time (e.g. days or even weeks in the case of forest fires). Increased levels are associated with industrial activity and levels in the Community are generally higher when the wind is blowing from the southeast to southwest. However, Fort McKay's Healing the Earth criteria and targets are generally being met therefore PM<sub>2.5</sub> is rated in the green zone.

For details see Section 2.0, Fort McKay Specific Environmental Assessment (Fort McKay IRC 2010b).

**Box 8-13: Air Emission Effects on Vegetation**



**Indicator Summary**

**Stressor: Pollution**

Fort McKay values the health and vitality of vegetation communities within their Traditional Lands. Since air emissions were minimal in the 1960s, it is assumed that the pre-development air quality did not have any adverse effects on natural vegetation. Current regional air emissions, mainly from oil sands developments, that can cause effects on vegetation are as follows:

*SO<sub>2</sub>, Ozone, and Potential Acid Inputs* - Currently, average annual SO<sub>2</sub> levels within Fort McKay's Traditional Lands are below Fort McKay's Average Annual Criteria for lichens, forests and natural vegetation. Potential Acid Input (PAI) or acid deposition modeling indicates that current PAI levels are below effects levels, except if very close proximity to emission sources. Similarly, current and modeled ozone levels are generally below Fort McKay's effects criteria. Therefore, Fort McKay rates current levels of levels of SO<sub>2</sub>, PAI and ozone within the green zone of the gauge.

*NO<sub>x</sub>, and Nitrogen Deposition* - An evaluation of nitrogen deposition information for region Indicates that current levels on Fort McKay's Traditional Lands in the vicinity of existing mining projects may be at effect levels. Similarly, data indicate that at certain locations, NO<sub>x</sub> may exceed direct effects thresholds. Therefore, regional nitrogen deposition as well as levels of NO<sub>x</sub> are rated in the yellow zone and need to be addressed.

*NH<sub>3</sub>* - Regional ammonia monitoring indicates that ammonia values may currently be at levels that could adversely affect sensitive vegetation receptors such as lichens, and therefore regional ammonia levels are a concern to Fort McKay. NH<sub>3</sub> is rated in the yellow zone, further work needs to be done monitor and more fully evaluate potential sources and effects of ammonia.

For details see Section 2.0 and Appendix 2-1, Fort McKay Specific Environmental Assessment (Fort McKay IRC 2010b).

**Box 8-14: Watershed Disturbance****Indicator Summary****Stressor: Industrial Water Use**

For McKay assessed the current state of Athabasca River watersheds that are used for fishing, hunting, trapping and gathering. Development in watersheds not only influences specific traditional land use areas and resources, and groundwater and surface water systems, in some cases it threatens the very sustainability of the watershed.

Watershed disturbance due to development in the 1960s is essentially zero in all lower Athabasca River subwatersheds within Fort McKay's Traditional Lands.

Currently (including approved developments), several watersheds are rated as 'threatened' (yellow on the gauge) since land disturbance is between 20 and 40% and disturbance of this level has been shown to adversely affect watershed sustainability (Deboer and Jablonski 1978). Threatened watersheds include the Beaver, Tar, Calumet and Muskeg river watersheds and the McLean Creek watershed. In some of these watersheds portions of the mainstem river (e.g. Beaver, Tar) and/or several creeks (e.g. Muskeg River tributaries) have been lost to development.

The current state of the following watersheds is rated as sustainable (disturbance is less than 20%): Ells, Steepbank, MacKay, Firebag and Pierre Rivers, and Clarke, Asphalt and Grayling Creek.

Community members are very concerned about wildlife abundance and believe that population levels of key species have declined. There is some indication population levels have decreased for some species. Unfortunately, currently there are very few studies available on wildlife population levels, so habitat availability is looked at (with the assumption that there is a link between habitat availability and abundance). The effect of industry disturbance on current habitat availability for select animals – moose, beaver, lynx, fisher and marten - was examined. These species were selected based on their significance to the Community of Fort McKay - both moose and beaver are considered “Cultural Keystone Species” for the Community and lynx, fisher and marten are key furbearers for trapping. As well, habitat data are available for these species. Habitat for each species was assessed for intense, moderate and low culturally used areas

within the Community's Traditional Lands. These areas were defined in a graduate thesis using information derived from Fort McKay's Traditional Land Use and Occupancy study (McKillop 2002, FMFN 1994). Habitat was also assessed within the forty township area surrounding the Community referenced in Section 8.3.1.

Essentially, the habitat studies indicate that there are currently adverse effects (ranging from 10 to 25% habitat loss) for all these species within intense culturally used areas and within the forty township area. As well, for beaver adverse effects are also seen in moderate use areas. Impacts on these habitats are rated as yellow (10 to 20% loss) or red (> 20% loss) depending on the extent of habitat loss. See Boxes 8–17 through 8–20 for an indicator summary for each of these species.

**Box 8-15: Watershed Index for  
Athabasca River**



**Indicator Summary**

**Stressor: Industrial Water Use**

1960s flows in the Athabasca River were essentially natural, with very small net withdrawals from Fort McMurray and upstream.

Currently, water withdrawals from the Athabasca River for oil sands use are, on average, 9.6 m<sup>3</sup>/s. The influence of water withdrawals is most noticeable in the winter when water withdrawals comprise up to about 8% of the winter flow in a year 10-year dry hydrological condition.

If approved (but not yet operational) developments are included include, the net water allocation for oil sands use would be 13.5 m<sup>3</sup>/s, about an 11% of the winter flow in a year 10-year dry hydrological condition.

*An Interim Framework: Instream Flow Needs and Water Management System for the Lower Athabasca River* (also known as the Phase 1 Water Management Framework) is currently in place (AENV and Fisheries and Oceans Canada, 2007). The Phase 1 Water Management Framework sets maximum withdrawal rates for each week of the year and would limit a portion of water withdrawals during some low flow conditions. However, the Phase 1 framework is not considered fully protective of the river and further measures need to be put in place to protect the Athabasca River, especially in light of planned developments, which would add another 3.5 m<sup>3</sup>/s withdrawals.

Fort McKay's surface water assessment criteria set the state of the lower Athabasca River watershed for the Base Case Scenario as Threatened (yellow on the gauge) since the net change in stream flow in any given season is > 10% but less than 20% and the change in watershed area

Recent surveys carried out by Sustainable Resource Development as part of the Fort McKay Country Food Availability Study have shown that moose populations have declined within Wildlife Management Area 531, which overlaps the Fort McKay's Traditional Lands west of the Athabasca River (SRD 2009). This evidence suggests that habitat loss from oil sands development is adversely affecting moose populations. In this assessment, sufficient population data for other wildlife species were not available and hence were not analyzed. However, if moose populations are being adversely affected by oil sand development, it is likely that other wildlife species populations are also being adversely affected. Both Canada lynx and fisher/marten have lost large amounts of high quality habitat. As a precautionary approach, it should be assumed that other wildlife species populations are being adversely affected until shown otherwise.

**8.3.7 Reliance on the Wage Economy Has Changed How Community Members Spend Their Time**

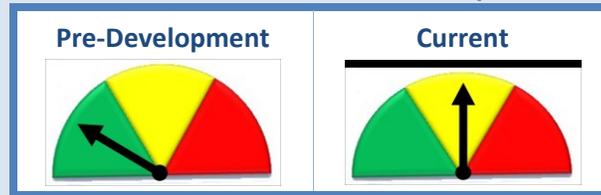
Decreased availability of traditional foods from the land due to the factors noted above - reduced land availability, reduced wildlife populations, perceived changes in quality of the products themselves (wild meat, fish, plants), reduced access for the people of Fort McKay and increased access and competition from non-Aboriginal

hunters and recreationists - has reduced the ability of all who wish to participate in the traditional way of life. As early as 1983, the Fort McKay Band Administration identified a strong concern with the people's option to pursue traditional activities:

*The key point is that the problem facing Fort McKay is not one of the availability or non-availability of wage employment per se but rather of maintaining the flexibility within our Indian economy for the varying requirements of our population..Many prefer seasonal wage labour so as not to interfere with hunting, trapping, fishing and gathering. This is not to say that some individuals will not want full time wage employment, but still others want to get whatever cash they require by trapping and living from what the land provides on a full time basis. But you will appreciate that this is our decision and responsibility to provide for the varying preferences of our population so as to achieve our plans of ... development.*

*Our largest problem is not jobs, but rather creating the conditions under which our own economy can recover the flexibility lost from past resource development encroachment within our territory so that we can implement our model of ... development . This is the only way we can see to escape the fall from the cliff: that is, to maintain our Indian economy and to decide on its mix.*

#### Box 8-16: Groundwater Analysis



#### Indicator Summary

##### Stressor: Industrial Water Use

There are no comprehensive groundwater data currently available with which to assess the overall affects on groundwater within Fort McKay's Traditional Lands; most groundwater assessments are project-specific. Impacts on groundwater are rated as yellow (caution) on the gauge since there are several types of impacts to traditional use that occur with most existing oil sands mining projects and the regional extent of these is not currently well documented.

The physical removal of an aquifer due to mining will prevent any future use of groundwater from the aquifer and can impact surface waterbodies by reducing groundwater baseflow to lakes and streams.

Mine dewatering activities cause shallow groundwater level declines along the perimeter of mine pits that can affect fens, which are groundwater fed wetlands. Effects on fens are a major concern of Fort McKay residents, as groundwater from fens is commonly used on Traditional Lands and fens support traditional plants. Predicted spatial extent of drawdown in fens around two proposed mines ranges from about 400 ha to 1500 ha of adjacent fens (Shell 2007b); other mines would be expected to have a similar drawdown effect on fens.

Groundwater quality (and eventually surface water quality) may be affected when process-affected seepage from tailings ponds enters the groundwater flow system. All existing mines have at least one tailings pond.

(FMTA 1983: 193-194)

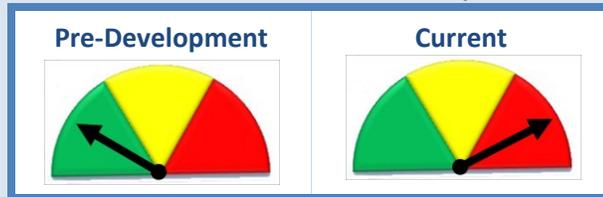
With decreased availability of traditional foods from the land comes the need for Community members to participate more intensely in the wage economy, which, in turn, impacts the way people hunt. Many of the adults in the Community work within the wage economy and individuals who work full time, particularly at the mines, don't have as much time to hunt. The time off from work that Community members do have is limited in duration, and undeveloped habitat is too far away for people to visit in one day which has resulted in many people spending less time pursuing these activities. Often hunting trips are carried out on the weekend or during vacation, and are reliant on family and friends that have trap lines within reasonable travel distance from Fort McKay. Travel time required to access land that is available for hunting, trapping or gathering has greatly diminished people's opportunity to use the land. In addition, the ability to drive to hunting camps, bring modern supplies and use modern technology changes the way the people engage in the activity and often diminishes the need to utilize former cultural practices.

*There aren't many young people that can harness a dog these days.*

*There are only a few kids that can hunt. You get up at 5:30 am to go to work - there is no time to hunt.*

(Fort McKay Workshop 2008)

### Box 8-17: Moose Habitat and Population



#### Indicator Summary

##### Stressor: Loss of Land

Moose is a Cultural Keystone Species for Fort McKay and secure moose populations are very important for hunting and the on-going sustainability of Fort McKay's culture.

Pre-Development there was essentially no disturbance to moose habitat within Fort McKay's Traditional Lands. The best moose habitat is concentrated near the Athabasca River Valley, and within the Muskeg and Firebag river drainages.

Currently, a substantial amount of moose habitat is disturbed; 20% of the high and moderate quality moose habitat in Fort McKay's intense use Culturally Significant Ecosystem (CSE) traditional land use areas. When looking at a township area that encompasses the Community, there is 25% moose habitat loss.

Recent surveys carried out by Alberta Sustainable Resource Development as part of the Fort McKay Country Food Availability Study show that moose populations have declined within Wildlife Management Area 531, which overlaps the Fort McKay's Traditional Lands west of the Athabasca River.

The gauge is in the red zone since there are substantial moose habitat losses in areas of intense traditional use as well as close to the Community (>20% habitat loss is considered adverse and significant) and there is a population study that demonstrates a decline in moose populations within Fort McKay's Traditional Lands.

For details see [Section 6](#), Fort McKay Specific Environmental Assessment (Fort McKay IRC 2010b).

As well, Elders have less opportunity to share their knowledge and experiences out on the land. Working adults and youth attending school may head out into the bush on weekends in small groups to camp, hunt and socialize, but Community members suggest that it is uncommon for Elders or experienced adult hunters to join these excursions. As discussed during Community workshops, this reduced intergenerational transfer of knowledge is a concern for Elders in the Community. Knowledge holders and experienced hunters and trappers insist that traditional skills must be taught out on the land, but opportunities are scarce due to work and school schedules. This is exacerbated by reduced opportunities in close proximity to the Community.

*We learn by doing – you cannot get this knowledge – the meaning behind the actions – from a book.*

*(Fort McKay Workshop 2008)*

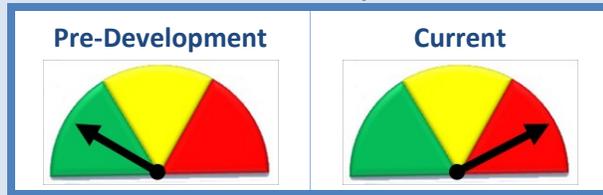
Finally, time-limited work schedules and access to shopping in Fort McMurray have made shopping for non-traditional foods an attractive option for many working Community members. Fewer people rely on traditional foods for survival (Dersch and Bush 2008).

*In our time if we didn't hunt or fish we didn't eat. That wasn't a nine-to-five job. Everything you did in the day (you did for survival)... there was no day off.*

*We used to live off the land. People were healthy. Now we eat from the store... Eating beef and pork makes Indians sick.*

*Now we go to Safeway, the liquor store, the drug dealer (whatever) but we don't go back to our culture.*

### Box 8-18: Canada Lynx Habitat



#### Indicator Summary

##### Stressor: Loss of Land

Canada lynx is an important trapping species for Fort McKay.

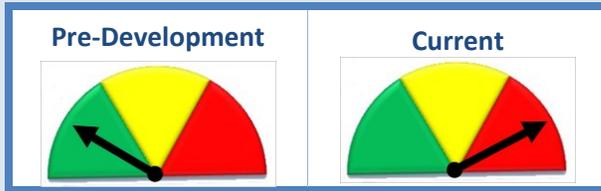
The best Canada lynx habitat is concentrated near the Athabasca River Valley and in the northeast portion (including the Muskeg and Firebag drainage basins) and the northwest corner of the Fur Bearer Culturally Significant Ecosystem (CSE).

High and moderate Canada lynx habitat has been lost in the Moderate Use CSE (9%), Intense Use CSE (14%), and Forty Township Study Area (26%). There was no change in lynx habitat in the low use CSE.

Since habitat losses 20% or greater are considered significant and could potentially lead to declines in population levels, the gauge is in the red zone for lynx habitat impacts in the FTSA and in the yellow zone for impacts within the intense and moderate use CSEs.

For details see [Section 6](#), Fort McKay Specific Environmental Assessment (Fort McKay IRC 2010b).

**Box 8-19: Beaver Habitat**



**Indicator Summary**

**Stressor: Loss of Land**

Beaver is a Cultural Keystone Species for Fort McKay and secure beaver populations are very important for trapping and the on-going sustainability of Fort McKay's culture.

In contrast to other species examined in this assessment (moose, Canada lynx, and fisher/marten) whose high quality habitat is concentrated along the Athabasca River valley, this area has low habitat suitability for beaver.

Currently, beaver habitat has been lost within the intense (23% loss), moderate (17% loss) traditional use areas of the Fort McKay's Fur Bearers Culturally Significant Ecosystems (CSE). Within a forty-township area surrounding the Community, about 20% of the high quality beaver habitat has been lost. There are lesser impacts on low use CSE (9%).

Since habitat losses 20% or greater are considered significant and could potentially lead to declines in population levels, the gauge is in the red zone for impacts to beaver habitat in the intense and moderate CSEs.

For details see [Section 6](#), Fort McKay Specific Environmental Assessment (Fort McKay IRC 2010).

*Everything we had came from the land. Now we don't rely on anything on the land.*

(Fort McKay Workshop 2008)

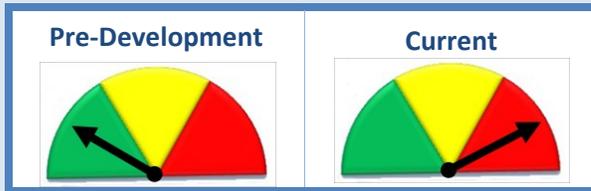
## 8.4 Hunting, Trapping, Fishing and Gathering in 2008: Linkages with Cultural Values

Hunting, trapping, fishing and gathering are still activities that the people of Fort McKay carry out in 2008. There have, however, been significant changes in the environment that have compromised the land-base on which these activities depend. The direct loss of land through development impacts available harvesting locations and methods. In turn, this reduces the amount of time spent carrying out harvesting and associated activities such as cooking and sharing country foods, tanning hides and making tools.

As a result of these changes to Fort McKay's Traditional Lands and waters, harvesting has changed from the 1960s. Based on information from Community workshops and literature reviews, there has been a considerable shift in terms of the traditional harvesting-related values. Although harvesting-influenced Community cohesion appears to be strong today (for example, hunting and gathering have become important as a recreation and social activity), the other cultural values have been weakened.

### 8.4.1 Tradition

As more land around Fort McKay becomes unavailable and/or people have less time to go hunting with their Elders, fewer people have the opportunity to learn the traditional ways of hunting. Knowledge, skills, and traditions can only be passed on out on the land. Hunting has lost part of its function - to instill the value of tradition

**Box 8-20: Fisher/Marten Habitat****Indicator Summary****Stressor: Loss of Land**

Fisher and marten are important trapping species for Fort McKay.

The best fisher and marten habitat is concentrated near the Athabasca River Valley and in the northeast portion and northwest corner of the Fur Bearer Culturally Significant Ecosystem (CSE).

Currently, fisher and marten habitat has been lost within the intense (10% loss) traditional use area of the Fort McKay's Fur Bearers CSE and within a forty-township area surrounding the Community (22%). There are lesser habitat losses in the moderate (9%) CSEs and negligible losses within the low use CSE.

Since habitat losses 20% or greater are considered significant and could potentially lead to declines in population levels, the gauge is in the red zone for fisher and marten habitat impacts in the FTSA and in the yellow zone for impacts within the intense use CSE.

For details see [Section 6](#), Fort McKay Specific Environmental Assessment (Fort McKay IRC 2010b).

(transfer of knowledge and values). This function has not been totally lost. There are people that seek and share traditional knowledge from within the Community:

*Young people that want to learn traditional ways seek knowledgeable people.*

*[Sometimes] when we go hunting we go towards the mountains where there are no distractions. We take a couple of youth and we explain what we can in Cree and do protocols and teach about hunting and the meanings.*

(Fort McKay Workshop 2008)

Community members feel that the tradition of berry picking is symbolic of Aboriginal culture and even though berry collection is no longer considered necessary for survival, it remains an important means of sharing and passing on traditional knowledge out on the land.

Community members indicate that during berry picking excursions, it is common for Elders and knowledgeable adults to share stories of past experiences in the bush. These excursions also provide youth with a unique perspective on historical events that have shaped the lives of Aboriginal people living in the region:

*Kids today, all their learning is from books, it's all in (their minds). Unless you learn things on the land, you can't know it from (your heart).*

(Fort McKay Workshop June 2009)

**Value - Tradition: Weakened since 1964**

### 8.4.2 Self-Reliance and Self-Determination

The linkages to self-reliance and self-determination have been disrupted and changed. Earlier studies in Fort McKay suggest that "Traditional patterns of consumption appear to have emphasized independence and self-sufficiency. As people become more accustomed to participation in a market economy, they have

become increasingly dependent on others for the basic essentials of life as well as for the luxuries” (Van Dyke, 1978). Workshop participants suggest:

*There are only a few kids that can hunt (Fort McKay Workshop, 2008).*

*(In the past) everything we had came from the land. Now we don't rely on anything on the land (Fort McKay Workshop, 2008).*

*Now the value of the money is more important because it is more critical for day to day needs than hunting. Even in the 60s ... hunting and trapping provided money, but not today (Fort McKay Workshop 2008).*

The linkages to self-reliance and self-determination have been disrupted and changed because fewer Community members harvest plants and animals as a subsistence activity that provides healthy country food and medicine. According to workshop participants “Now, if you don't have money, you don't eat” (Fort McKay Workshop 2008). In terms of self-determination, Community members feel powerless to stop industry clearing traditional berry patches. Many feel that the choice to pursue traditional activities such as berry picking is out of their hands and so traditional methods of managing resources (for example, limiting harvest in some areas or burning) are no longer relevant. It should be noted that the people in Fort McKay attribute policies that limit burning to the forestry sector – not the oil sands industry.

**Value - Self-reliance & Self-determination: Weakened since 1964**

### 8.4.3 Rootedness and Rhythm of Nature

The linkages between harvesting and the value of rootedness and rhythm of nature have been weakened as the economic (subsistence) role of and opportunities for harvesting are reduced. Rootedness is affected because far fewer people have the ability to spend long periods of time out on the land. Industry has disturbed significant tracts of traditional harvesting locations, particularly those areas closest to Fort McKay. “Everything was taught on the land. We identify places in our language” (Fort McKay Workshop 2008). See Section 12.0 for further discussion on Fort McKay's goals with respect to language retention.

People would communicate observed natural events taking place on one portion of their Traditional Lands to indicate information about another event. For instance, when fireweed is blooming, people know that it is time to begin preparations to hunt moose. Yet, seasons no longer dictate the way Community members spend their time and with whom they spend that time. Work and school schedules require Community members to spend fixed amount of times with non-community members in non-traditional roles. Harvesting is still done during specific seasons, but work and school schedules affect how long harvesting excursions may be and thus indirectly affect where hunting can take place. “[We] lived by the season:

moose hunting, fishing, ducks, roe, berry harvesting. Now we live by the clock” (Fort McKay Workshop, 2008).

**Value - Rootedness: Weakened since 1964**

**Value - Rhythm of Nature: Weakened since 1964<sup>8</sup>**

#### 8.4.4 Cooperation, Caring and Respect

Community members feel that the independent nature of the wage based economy and the purchase of goods from stores, coupled with reduced harvesting, has weakened the link with Community values such as cooperation, caring and respect. Sharing still takes place among the relatively smaller groups including family and friends: “A group of men would go out and hunt and split the animal amongst themselves... I would split it with my sons or uncles or relatives and the rest of the people that we hunt with...We still share” (Coutu and Hoffman-Mercredi 2002: 59). However, there is a common belief that “Money divides families. Long ago there used to be sharing. Now everyone is for themselves” (Fort McKay Workshop 2008).

Increased population in Fort McKay has also changed the way people share: “People are sharing differently - in part because of the number of people in the community” (Fort McKay Workshop 2008). The industrial boom has forced people who can’t afford to live in Fort McMurray to move back to Fort McKay. As the number of people living and moving through the Community increases, people become less familiar with each other. A reduction in harvesting and the increase in population affect Community perceptions of sharing. “When someone killed something everybody shared. Today you hear about it; they don’t share; you have to buy it in order to have some” (Fort McKay Workshop 2008). Sharing of moose meat, for example, following a hunt is an act of respect for elders and other family members. Gift giving and distribution of meat solidify important social relationships both within the Community and between people and the land. Inability to hunt incurs a social as well as a dietary cost.

The people of Fort McKay continue to consider berry picking a healthy way to interact with family on the land and as a means to stay connected to nature, family and to their culture. Families continue to share berries (if/when large quantities are picked); especially with Elders who are too sick to go into the bush. However, without exception, Community members feel that their opportunities to pick have been drastically reduced because of industry. This loss is attributed to the actual loss of berry patches within oil sands leases; limited access through project areas; Community perceptions related to industrial pollutants; and increased costs associated with travel to remote gathering areas.

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<sup>8</sup> Though Trapping activities still support some aspects of Rhythm of Nature.

The fact that people don't depend on harvesting for survival has also affected its ties with respect. "Some food even gets wasted which leads to less respect" (Fort McKay Workshop 2008). Industry work camps are particularly noted for wasting food.

**Value - Cooperation & Caring: Weakened since 1964<sup>9</sup>**

**Value - Respect: Weakened since 1964<sup>10</sup>**

#### 8.4.5 Peace, Purpose and Connectedness

Although there is still a connection between hunting and spirituality, protocols are not as commonly practiced. Community members describe this change as weakening the link with the spiritual values of peace, purpose and connectedness: "we don't have time to do protocols anymore because of the fast pace of life... Young people don't really do protocols". "Certain parts of the moose are used for offerings. Now not too much" (Fort McKay Workshop 2008). As explained above, industrial development has an indirect effect on the weakening of spirituality because of reduced opportunities to hunt due to loss of land and due to the pressures on Community to adjust to the wage economy.

While it is common for Community members to associate offerings with medicinal plants, fewer Community members associate offerings or specific protocols with berry picking. In general, less time spent on the land and in particular harvesting foods, managing resources and collectively working in harmony with nature. As a result, the values of peace, purpose and connectedness weaken.

**Value - Peace, Purpose & Connectedness: Weakened since 1964**

#### 8.4.6 Cohesion and Bonding

Changes in hunting have strengthened its function of cohesion and bonding between peers – as hunting has become more of a recreational and social activity: Now people go hunting to "have a good time."

However, when a value has been identified as "strengthened or maintained" it does not necessarily mean that the relationship between the activity and the value currently exists in the same terms as it did in the 1960s. Rather, it refers to the intensity of the link. The relationship may look quite different than it did in the 1960s. For example, "Bonding and Cohesion" in harvesting activities has changed in the way it bonds the Community (used to be more of an inter-generational while it is now more among peer groups), but it is still a value "reinforced" by the activities. These changes may still have some other very strong impacts in Fort McKay culture.

**Value - Cohesion & Bonding: Maintained since 1964**

<sup>9</sup> Though Trapping and Gathering activities still support some aspects of Cooperation and Caring.

<sup>10</sup> Though Trapping activities still support some aspects of related to Respect.

## 8.5 Summary: Changes in Culture Stemming from the Changes to the Land

In the 1960s harvesting (hunting, trapping, fishing and gathering) was an important part of the Fort McKay economy and culture. Harvesting was directly and indirectly related to all cultural values. In present days, although harvesting activities continue, cultural values associated with harvesting (with the exception of Cohesion or Bonding) have been weakened as a result of industry activities and its stressors.

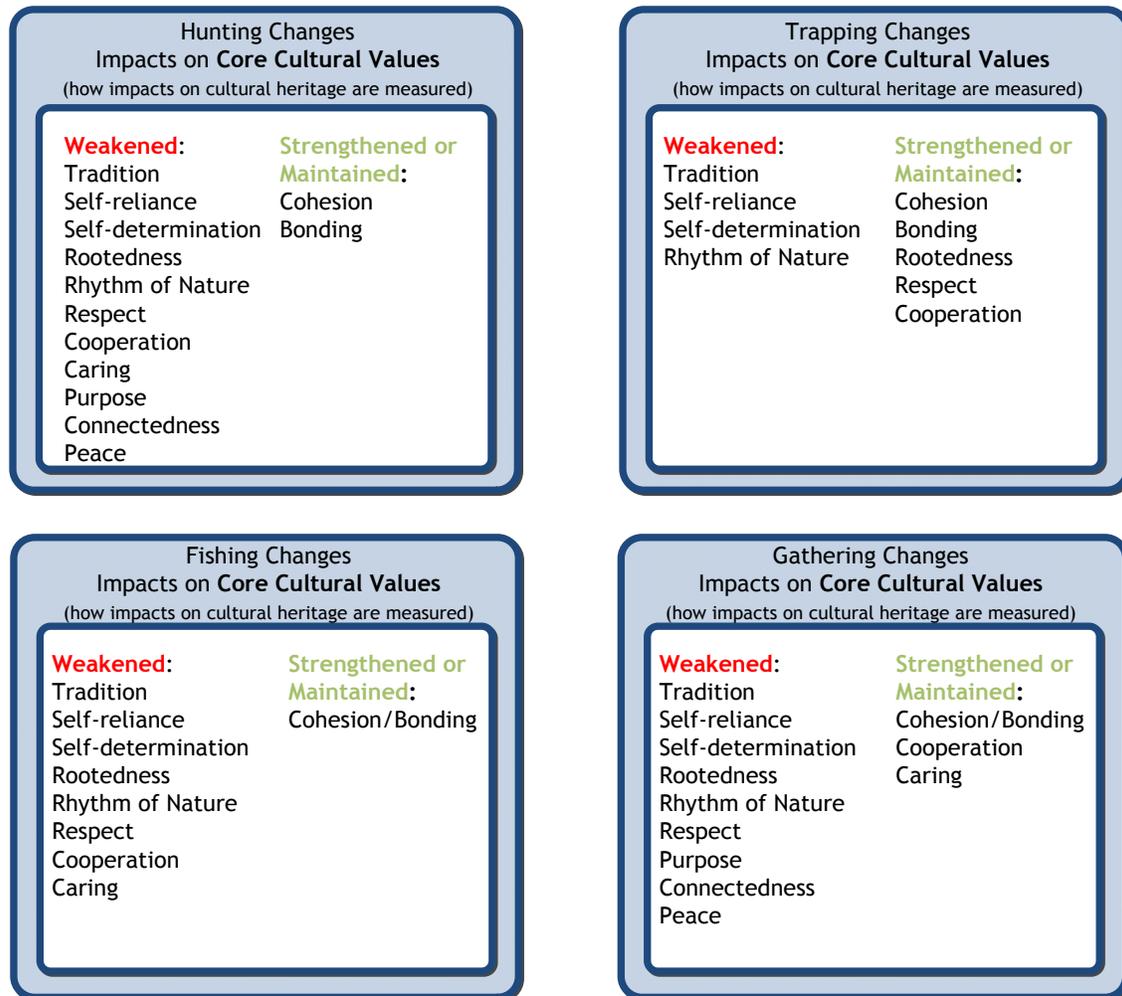


Figure 8-3: Impact on Cultural Values since 1964—Hunting, Trapping, Fishing and Gathering

## 9.0 Cultural Change and Full-Time Wage Employment

Survival in the boreal forests required a great deal of communication, cooperation and commitments toward the common good. Fort McKay peoples created strong communal societies composed of large extended families that worked together as a socio-economic unit. Everyone from the smallest child to the oldest grandmother contributed to the group's survival (Coutu and Hoffman-Mercredi 2002: 58). "Labour was not divided into highly specialized categories to be offered for sale on an open market as is the [wage economic] system" (Van Dyke 1978: 55). The subsistence life-style and extended kinship network provided secure work for everyone, young or old, food and income, maintenance of traditional values such as sharing and respect for man and nature as well as ample leisure time to enjoy the environment in which they lived, have tea dances, spiritual ceremonies and to provide Elders with opportunities to pass oral history, the traditions, the culture, the experiences of a lifetime of learning (FMTA 1983:34).

*In the old days it was important to be together; live together; work together.*

*It was a hard working life and the family was there for you.*

*Working together, everyone had a job, a sense of responsibility.*

(Fort McKay Workshop, September 2008)

"Traditionally, the principle underlying economic transactions for residents of Fort McKay was one of reciprocity. When food, shelter, and so on were available to an individual, one had an obligation to distribute these goods in a prescribed manner within one's own kin group. Conversely, when one's kin had goods available, one had a claim to a set portion. The kinship system indicated to the individual those persons to whom one had economic obligations, as well as those from whom one might receive economic privileges. Reciprocity was activated and operated through the kinship system" (Van Dyke 1978: 56). The traditional system had the effect of equalizing wealth so that no one individual had abundance while others were in need.

### 9.1 Employment in the 1960s

Increased contact with the western culture increased the Community's participation in the wage-based economic system through occasional and seasonal wage labour. "We were reasonably successful in dealing with the effect of the fur trade era. We have kept these within reasonable bounds given the circumstances. We have also been reasonably successful in incorporating fur for sale and even wage labour within our Indian economy without jeopardizing its very survival" (FMTA 1983: 21, 33).

During the 1960s, seasonal wage labour included forestry, fire fighting, and work for Great Canadian Oil Sands (GCOS) and Abasand Oil Limited.

*Syncrude/Suncor was initially of help to the community through employment. Things were good then. But the new companies are really locking things up; access, hunting, trapping, even getting to reserve at Moose lake... Long waits and gates to cross lease areas.*

(Fort McKay Focus Group January 2009)

## 9.2 Cultural Values related to Part-Time Wage Work (Pre-Oil Sands Development)

This mixed economy in the 1960s of part-time wage work and traditional harvesting (hunting, trapping, fishing, and gathering) strongly reinforced traditional cultural values of self-reliance, rhythm of nature, cooperation and caring.

### 9.2.1 Self-Reliance, Rhythm of Nature, Cooperation and Caring

Work for industry in the 1960s helped supplement the traditional family economy. The Community economy was still very much based on traditional land based activities such as hunting, fishing, gathering and trapping. The financial resources obtained through seasonal industry work were in part used to acquire goods, tools and supplies to better perform traditional activities. In that sense it complemented their traditional land based economy without compromising their ability to be self-sufficient. The seasonal and complementary nature of industry work in the 1960's strengthened Community-based values. Some Community members would work for industry while others would continue to carry out traditional activities in the family, allowing each member to cooperate for the economic well-being of the group as a whole according to the rhythm of nature. Seasonal work provided economic resources to be able to better take care of the family.

## 9.3 Full-Time Employment Stressors Affecting the Community

The following descriptions of stressors resulting from working full-time for industry are derived from local observations and the knowledge of Fort McKay Community members shared during Community workshops.

### 9.3.1 Lack of Choice

The inability to harvest traditional foods has increased the need for full-time wage employment for industry in order to buy the basic necessities of life. A land use survey conducted in 2000 found that more than 50% of Community members surveyed want to carry out traditional land use activities, but less than 50% saw themselves as being able to do so. The only traditional activity that the majority of

people foresaw themselves as being able to carry out was to take part in gatherings (FMFN 2000).

### 9.3.2 Lack of Time to Pass Down Traditions

More Community members are relying on full-time jobs to support their families. These jobs tend to be year round – full-time employment with industry as opposed to seasonal jobs. As more and more Community members take on full-time wage employment, in particular those who do shift work, finding time to spend with children, spouses and extended family becomes more difficult. Oil sands projects operate twenty-four hours a day year-round, and offer incentives to employees willing to work over-time and during holidays.

As more people spend time at work, there is less opportunity for youth to spend time with Elders and their parents and less opportunity to spend time on the land. This has affected the intergenerational transfer of core cultural values. Within Fort McKay, values are changing with a new emphasis upon materialism - as has been the case in hundreds of other situations of culture contact in North America and around the world (Van Dyke 1978). In terms of the benefits, the overwhelming consensus is that “the only real benefit of working is money”.

*There are no family values. All we care about is getting that dollar. Yet there are people that can't work. Without money you can't eat, go anywhere.*

(Fort McKay Workshop September 2008)

Individuals with full-time jobs don't have as much time to carry out traditional activities or develop traditional skills.

### 9.3.3 Participation in Full-time Wage Employment has Changed Patterns of Consumption and Way of Life

Time-limited schedules, land disturbance and access to shopping in Fort McMurray have made shopping for non-traditional and often less healthy foods an attractive option for many working Community members. Fewer people rely on traditional foods for survival, increasing consumption of pre-packaged and industrially processed food.

*In our time if we didn't hunt or fish we didn't eat. That wasn't a nine-to-five job. Everything you did in the day... there was no day off. Now people don't take the time.*

*We used to live off the land. People were healthy. Now we eat from the store... Eating beef and pork makes Indians sick.*

*Everything we had came from the land. Now we don't rely on anything on the land.*

(Fort McKay Workshop 2008)

## 9.4 Full-Time Wage Employment in 2008

Today, many Fort McKay Community members actively pursue economic and business opportunities to ensure their future financial and economic independence (Fort McKay First Nation website 2006).

## 9.5 2008 Cultural Values Stemming from Full-Time Wage Employment with Industry

Cultural impacts on the people of Fort McKay resulting from full-time wage employment are due not only to the activity itself but also because it entails taking time away from performing traditional activities. In that sense, working for industry has affected in one way or another all of the Community's traditional values. The following core cultural values have been affected directly by stressors related to working for industry.

### 9.5.1 Self-Reliance

Full-time wage employment has an element of self-reliance as people work hard to obtain the funds that they need to live in the new economy. However, the idea behind self-reliance has changed in the current context: "Now-everyone has their own time lines, their own jobs, you do it for yourself instead of for your family [implied extended family]". Independence is achieved more from individual effort and value, replacing communal effort and values. Through self-employment and entrepreneurship or through work with the Fort McKay Group of Companies, certain members of the Community have been able to maintain and increase their independence and self-reliance by controlling their income and time.

**Value - Self-reliance: Maintained since 1964**

### 9.5.2 Rhythm of Nature or Rootedness

Full-time wage employment allows very little if any time to conduct traditional activities on the land, especially following the seasonal rounds. It does not instill land values such as rhythm of nature or rootedness and also reduces the time and ability of Community members to be in close contact with the land in a meaningful way.

**Value - Rhythm of Nature & Rootedness: Weakened since 1964**

### 9.5.3 Cooperation and Caring

Full-time wage employment in 2008 in the context of Fort McKay assists those employed to support the values of cooperation and caring within their families and the Community. However, these values also vary from their traditional form: in a wage-based economy, principles of distribution are based upon a “market economy” rather than upon reciprocity. The distribution system of the larger society is structured to allow individuals to excel and to accumulate wealth (Van Dyke 1978). Having to rely on purchased food, goods and services that come from Fort McMurray has affected the way people share. In the past, families worked together to harvest meat so everyone would have food. Community members also described how they make good money working for industry to provide for their immediate families: travel, good food, good clothing and entertainment. However, they were concerned about the way people share and care for each other in the Community at large.

Value - Cooperation & Caring: Maintained since 1964

## 9.6 Summary: Changes in Culture Stemming from Full-Time Wage Employment for Industry

The mixed economy of the 1960s allowed the practice of the traditional way of life and thus was more reflective of traditional values than the wage economy of today. The inability of Community members to integrate the traditional with the resource extraction based economy hampers the Community’s ability to transfer and maintain traditional values.



Figure 9-1: Impact on Cultural Values—Full-time Wage Employment for Industry

## 9.7 Full-Time Wage Employment for Community-Based Organizations

Up to and through the 1960's, the responsibilities of Community leadership focused primarily on band membership and local Community issues. Industry considered Fort McKay to be the "government's responsibility" (VanDyke 1978) and rarely consulted the Community on matters related to future development, continuing operations or accidents. Because the scope of what was considered "working for the Band" was relatively narrow and within the context of a "white" administrative government, few core cultural values were instilled through this activity.

Over the last 25 years, Fort McKay has strived to build its internal institutional capacity to keep up with the many industry and government initiatives that could affect the Community and its Traditional Lands. To deal with industry and government business, the Band established a professional administration in the 1980s; today, the Fort McKay administration includes or supports the following groups or organizations:

- Chief and Council
- First Nation Administration
- Métis Administration
- Industry Relations Corporation (IRC)
- Trappers Group
- Elders Advisory Groups
- Community Development Team
- Community participation in industry studies – traditional environmental knowledge, traditional land use studies, Healing the Earth Strategy, human exposure studies, country food studies, cultural heritage work, Community health strategy

Fort McKay has also built capacity in the following areas:

- Fort McKay School Board
- Health Centre
- Wellness Centre
- Fort McKay's Woman's Association
- Mothers of McKay

- Culture and Recreation Board
- Young Mom's Program
- Community Enhancement Society

The Fort McKay Group of Companies and other companies owned and operated by members of the Community produce goods and services for the oil sands industry and provide employment, training and resources. Because these businesses are owned by Community members, working for the Group of Companies is considered to be working for the Community. However, full-time wage employment for the Group of Companies and full-time wage employment for industry (or any other entity) still means that people's ability is limited to spend time on the land carrying out cultural activities. Many Community socio-economic programs are moderately effective at instilling traditional values. They do not replace teaching shared through traditional role modeling.

Industrial activities on Fort McKay's Traditional Lands and their impacts on the Community's social and economic fabric have created the need to develop specific leadership and administrative capacities to deal with these pressures. Working for the Community administration or companies appears to have helped maintain some traditional cultural values by new means for some Community members. The mechanisms and expression of these values are different than they were in the 1960s. For example, given the opportunity maintain a sense of rootedness by participating in an industry-sponsored day trips to traditional land use areas versus through activities on a Trapline, most people in the Community would choose the latter. While there may be some element of rootedness maintained during a field outing it does not reflect the nature of the activities and values as reinforced in the 1960s.

Elements of other values, such as tradition, are partly supported through participation in Community land use planning related workshops and studies. However, elders experience "fatigue" from continuous interviews and meetings with an often-perceived lack of tangible benefit. People continue to feel frustration and hopelessness over the continued loss of land and lack of social and environmental change as a result of the information and advice they repeatedly provide to industry. So while a version of tradition is supported through Community participation in these studies its expression is different than it was in the 1960s. This sentiment is true of many of the values discussed below. With the above in mind, the following values have a current linkage with wage employment with Community organizations.

- **Self-determination:** Today, Fort McKay has a democratically elected Chief and four councilors. Elections are governed by the Fort McKay election code and are held every four years. Fort McKay Métis residents are represented by Métis Local #63; Métis Locals hold democratic elections every three years for the

positions of President, Vice President and Secretary Treasurer. The Métis Local executives oversee administration of programs and services available to their members and represent the interests of their membership with government and industry (*Fort McKay: a Community on the Move*).

In addition to elected leadership, Fort McKay has built internal capacity to deal with the many industry and government initiatives that could affect the Community and its Traditional Lands. Fort McKay actively engages with provincial, regional and local government levels and continues to seek out ways to increase their participation in land management within the Traditional Lands. These activities instill the value of self-determination.

- **Self-reliance:** Full-time work with Band administration or with the Group of Companies is a reflection of the increased entrepreneurship capacity of Fort McKay, instilling the value of self-reliance.
- **Tradition:** Today, a number of Elders, hunters and trappers and other knowledge holders are retained by the Fort McKay First Nation's Industrial Relations Corporation (IRC) to participate in studies or Community workshops for environmental planning purposes. Community participation in Traditional Land Use Assessments, TEK studies and projects initiated by regional working groups have become one of the primary mechanisms for using language, passing on traditional skills, knowledge and cultural practices. These studies and projects often involve participation of Elders, adults and youth, providing a place for passing down knowledge, and, to some degree, helping maintain intergenerational Community Cooperation and Cohesion. The strategic and long-term view of preserving the land and the culture for future generations is linked to the traditional value of Purpose. Again, however, these programs do not ameliorate the large gap left through a decreased ability to work as a Community teaching and guiding younger generations on a daily basis while out on the land. Community members feel that the opportunities presented through Traditional Land Use Assessments and the like are much too brief (they are usually day trips, rarely field camps) and don't consider the need for longer unrushed time to be out on the land teaching and learning traditional ways. Often there is a particular agenda, not set by Community members, to be addressed during day trips on the land. This does not allow much time for observation and reflection when on the land by Community participants. In addition, elders continuously emphasize the virtues of teaching children, in their own language, about Fort McKay culture while on the land. As one elder has stated that "if you fly them [children] to an area [rather than have them walk or sled there] that is like dropping them in a bowl. What have they learned? Nothing. They have to walk [in order] to learn" (Garibaldi 2006).

Much of the work, which often involves field visits, provides an opportunity, even if limited, for Fort McKay members to regain some sense of place and

connection to the land (Rootedness). Participating in the development of environmental and social studies such as Environmental Impact Assessments, Traditional Land Use Studies, wellness studies, asset mapping among others, provide an opportunity to maintain the traditional values of Connectedness. While these opportunities do help retain a sense of rootedness and connectedness, they are archival activities that do not replicate the complexion of the integrated activities that nourished community values in the 1960s.

- **Caring:** Implementation of social programs in Fort McKay formalizes an element of caring within the Community. Many individuals discuss the significance of visiting and sharing resources in the 1960s (i.e., caring) and these programs help maintain an expression of that value filled through traditional lifestyles.

### 9.7.1 Summary: Changes in Culture Stemming from Working for Community-Based Organizations

Working for the community itself, through the Band Administration or the Band-owned Group of Companies appears to offer Community members a more balanced approach than other full-time wage work. Although the stressors of full-time wage employment are still there – lack of choice, lack of time on the land to pass down traditions, changes in patterns of consumption and way of life – working for Community-based organizations appears to provide opportunities for cultural values to be maintained.



Figure 9-2: Impact on Cultural Values—Stemming from Working for Community based Organizations

## 10.0 Changes in Culture Stemming from Changes in Daily Lives

As this assessment makes clear, cultural changes stemming from industrial development are linked from oil sands industry stressors to the diminished opportunity to live a traditional way of life on the land (hunting, trapping, fishing and gathering). In turn, more intense participation in the economy of the resource extraction industry has led to changes in the everyday lives of Community members. This section of the CHA looks at three areas of daily family life that Community members state have been negatively affected by life in the wage economy: education, child-rearing and visiting (gatherings).

Education is understood as the transfer of specific knowledge and skills and refers to both traditional education and formal/official education in the school system. In terms of culture, education is closely associated with more traditional definitions of “socialization” which refers to the “process by which persons acquire the knowledge, skills, and dispositions that make them more or less able members of their society” (Van Dyke 1978: 88). Cajete (1994: 33) notes that in traditional Aboriginal systems, teaching and learning were intertwined with the daily lives of both teacher and learner: “every situation provided a potential opportunity for learning, and basic education was not separated from the natural, social, or spiritual aspects of everyday life”.

In times past, many Aboriginal families had an extensive network of brothers, sisters, cousins, aunts and uncles, all involved in child-rearing. Transmission of cultural knowledge occurred through everyday living as well as the rich tradition of storytelling. The interconnectedness of family members, like the interconnectedness of all life, solidified strong family values (Coutu and Hoffman-Mercredi 2002: 273). Elders participated in child-rearing, parental guidance, and the preparation of young people’s entrance into the adult world (Coutu and Hoffman-Mercredi 2002: 58).

Gatherings are social and political events that play an important role in the cultural and social life of Aboriginal peoples. Traditionally, gatherings were a time of sharing and social interaction, for the transmission of traditional knowledge, the building of political consensus, of conducting marriages, and of storytelling and trade (Coutu and Hoffman-Mercredi 2002, Fort McKay Workshop September 2008).

The locations of gatherings were often central and became significant places because “gathering places were like the centre cores in the circle of life which integrated the Dene clans” (Coutu and Hoffman-Mercredi 2002: 110). Traditionally, “small family bands would disperse in the late fall to traditional winter hunting grounds, coming together in the late summer to early fall when the plentiful resources of the region could support large gatherings. Archaeological and ethnographic evidence records a significant traditional gathering place used for

thousands of years at Ena K'erring K'a Tuwe (Cree Burn Lake or Isadore's Lake) near Fort McKay" (Coutu and Hoffman-Mercredi 2002). Over time, trading posts, such as Fort McKay and Fort Chipewyan, became the loci of seasonal gatherings. "Around Christmas or at New Years we would visit each other at the main campsite areas. This was the time for tea dances, and much visiting – a week at a time or more. Horses, dogs, teams, guns, everything would be given away....After we visit we return to our winter campsites and continue hunting and trapping fine furs (FMTA 1983:85, On the Way to Moose Lake 2002).

## 10.1 Aspects of Daily Life in the 1960s

### 10.1.1 Child Rearing

During the 1960s, the majority of the women stayed with their children in Fort McKay during the school year while men travelled to their Traps to work in the bush. Food, clothing, crafts and tools were produced in the Community year round. Families continued to work as a unit during the summer months, spring hunt, fall hunt and dry meat seasons. This connection to traditional activities provided the means for core cultural values to be passed on to the younger generation.

### 10.1.2 Education

In the 1960s, prior to the intensification of industrial development in the region, mandatory school had already started to affect Fort McKay culture. However, interaction between generations, especially during the fall and spring hunt and periods of preparation for seasonal work, facilitated the continuance of traditional education systems. In that sense, it is hard to separate the pure aspects of transferring knowledge and skills from other daily life activities of the 1960s.

### 10.1.3 Visiting

During the 1960s, Christmas and the summer months (June and July) continued to be the time for meeting together and visiting (Fort McKay Workshop September 2008, June 2009). In most cases visiting was done in the home or out on the land at camps. Visits were not always planned, but always welcomed and somewhat expected during certain times of the year. When adults came to visit, "The young ones were expected to stay to the side and be quiet" (Fort McKay Workshop September 2008); adults would share their stories describing their experiences over the last several months. Stories were often related to traditional harvesting activities and family and youth were able to learn from the experience of their extended family, friends and neighbours. "We would learn different things from different people".

## 10.2 Cultural Values in the 1960s (Pre-Oil Sands Development)

Through the development of personal skills and knowledge, child-rearing, education and visiting have a strong relation to core cultural values.

### 10.2.1 Tradition

As we raise our children, cultural characteristics are transferred to the younger generations giving continuity to the culture. “Identity, self-esteem, purpose to live and you need to pass that to your kids, for when industry goes” (Fort McKay Focus Group January 2009). Raising children was a primary way to transfer Language, which is another important cultural characteristic, related to a number of values: “Language’s our identity - our heritage - our way of distinguishing ourselves from others”. “The language you speak tells us who we are... Need to keep the traditions alive. If they [youth] can’t understand you, they can’t learn” (Fort McKay Workshop 2008).

As an activity intertwined with most other activities of daily life, traditional education had a role in instilling culture and values. Traditions pass knowledge from one generation to the next by performing activities together while sharing stories and appropriate techniques. “Knowledge came from doing it with family (berry picking) and through storytelling while doing it” (Fort McKay Workshop 2008).

While visiting, people used the Aboriginal languages and passed stories to each other and to the youth. Conversations were about traditional knowledge and skills that kept language and customs strong in the Community.

### 10.2.2 Self-Reliance and Self-Determination

Teaching and learning activities trained youth to provide for themselves and their families within the mixed economy. By gaining skills pertaining to a traditional lifestyle and a western economy, Fort McKay youth were better prepared and able to decide which type of lifestyle they wanted to pursue during their adult life.

Summer visiting was often when harvest planning was done and resource management decisions were taken. “Men used to talk about hunting and fishing and trapping and sometimes visited all night long” (Fort McKay Focus Group, January 2009).

### 10.2.3 Cohesion, Caring and Cooperation

Raising children is directly and indirectly associated with values of cooperation and caring “Everybody would take care of all the kids” (Fort McKay Focus Group, January 2009).

When parents, grandparents and extended family spend time looking after and supervising children, values related to Community cohesion/bonding are instilled. “In indigenous language everybody was “grandfather” or “aunt” so everybody had some authority to teach and care for children”. Traditional approaches supported by the mixed economy enabled bonding between generations. “Kids had more time with parents in the past, to bond with parents, respect, and they knew how to listen” (Fort McKay Focus Group, January 2009).

1960s educational activities occurred in classrooms, but also in small, cross-generational Community groups enabling values of cohesion, caring and cooperation to strengthen. “We would learn different things from different people”. “Families taught traditional ways on the Trapline”. Cajete (1999) notes that “teaching and learning occurred within very high-contexted social situations. The lesson and the learning of the lesson was intimately interwoven within the situation and the environment of the learner.”

The very essence of visiting was related to cohesion and bonding. People visited to share experiences, knowledge, stories, laughs, and views on current events. This brought people together and strengthened the ties between members of the Community.

Visiting was also about caring for each other and cooperation. The younger people used to be more active in visiting the Elders, bringing wild meat and supplies. People used to visit to care for each other: “Everybody visited each other in the bush, and when anybody killed anything everybody got some.” (FMFN 1984)

*One woman from the community used to visit all the homes every morning to make sure fire was going in each house.*

(Fort McKay Focus Group January 2009)

#### 10.2.4 Rootedness, Rhythm of Nature and Respect

*Living on the land is instilled when you are young. It is the way I was raised. At six years old alone on the trails I was not afraid. I had a sense of peace.*

(Fort McKay Workshop 2008)

*There was bonding [while doing activities in the land] and that builds respect. When I grew up, grandparents told us what to do and why. Now we don't have that...Kids had more time with parents in the past, to bond with parents, respect, and they knew how to listen.*

(Fort McKay Focus Group January 2009)

In teaching and learning land-based activities, the values of rootedness, rhythm of nature and respect were instilled. Time on the land increased each individual's familiarity with their surroundings, their knowledge and sense of responsibility for

the land, water and the animals that they depended on for survival. This knowledge and experience facilitated the use of place names and provided context for understanding the Community's culture and history. The values associated with land were clearly at the core of the education process: "Teaching and learning was a natural outcome of living in close communion with the natural world" (Cajete 1999: 53).

While visiting, adults would stay in the house and kids would be outside out of respect. "You could not even walk in front of an Elder – this is how we showed respect". Elders would stay at home and younger people would visit Elders also showing respect, and while resource management decisions and stories were told the value of respect for the land and animals was instilled in all age groups.

### 10.2.5 Purpose, Connectedness and Peace

Transferring knowledge, traditions and the culture to our children in general fulfils an important aspect of purpose for individuals. Passing down spirituality and the connection to ancestors embedded in tradition is a duty and an honour. "Identity, self-esteem, purpose to live... you need to pass that to your kids".

The activity of raising children is in itself for Dene culture an activity that is connected to nature, Community and ancestors: "The shining water that moves in the streams and rivers is not just water but the blood of our ancestors... The water's murmur is the voice of my father's father. The rivers are our brothers. They quench our thirst. They carry our canoes and feed our children... The wind also gives our children the spirit of life... Will you teach our children what we have taught our children that the earth is our mother?" (Campbell J. 1988, 34-35 in Coutu and Hoffman-Mercredi 2002).

These spiritual values were embedded in education through spiritual practices, ceremonies and protocols: "We teach through prayer, we need to take the time to talk to the youth... when you believe you are connected to the higher power; connected to our ancestors, it gives you strength".

Through visiting, the values of peace and purpose were instilled. Visiting was about creating and consolidating harmonic relationships in the Community and with the Creator. It also provided a sense of purpose for Elders by handing down stories and knowledge and for youth by taking care of Elders, sick people and other members of the Community.

*People visited after the spring hunt, when people were sick, at Christmas time and new years, at funerals.*

(Fort McKay Focus Group, January 2009)

## 10.3 Industry Stressors Affecting Daily Life

The following descriptions of industry-caused stressors on child-rearing, education and visiting and thereby on culture are derived from local observations and the knowledge of Fort McKay Community members.

### 10.3.1 Industry has affected the cost of living

With limited harvesting opportunities and bills to pay, people from Fort McKay seek out full-time wage jobs. However, as the population in Fort McMurray has soared, the cost of living has increased dramatically.

*Now-a-days both parents have to work to pay for bills, rent. Kids are left alone or with babysitters.*

(Fort McKay Workshop 2008)

*Because parents have to work, kids are left at home. People used to raise their own children.*

(Fort McKay Workshop 2008)

*Parenting has changed a lot since the 1960s; the men would go out trapping and fishing and the women would stay home and teach the children. Everyone had chores to do in the house. My mom was not out there working to survive – that was my dad’s work. She worked at home. Now-a-days, children don’t listen, they don’t know because they were not taught from when they were small – the mom is not at home. That is the problem.*

(Fort McKay Workshop, June 2009)

### Reliance on the wage economy has changed the way we spend our time and with whom we spend our time

As more Community members transition from seasonal labour and a mixed economy to year round full-time wage employment, many (in particular those who do shift work) have difficulty finding time to spend with children, spouses and extended family. Oil sands mines operate twenty-four hours a day year-round, and many offer incentives to employees willing to work over-time and during holidays.

*Mealtimes - this used to be important, we would eat together and share stories. We would spend time together and give thanks. Now we don't eat together, don't spend time together – not even on special holidays, because you can get double-time. Now anyone has their own jobs, their own timing. Everyone just worries about themselves.*

(Fort McKay Workshop 2008)

To meet industry and Community requirements for non-labouring positions, students must complete high school and attend post-secondary institutions. The amount of time and commitment required to be successful in an academic setting limits the time young people can spend out on the land and the time they spend learning from Elders. Youth attending high school in Fort McMurray must catch the bus early in the morning and don't get home until early evening.

*Residential schools took kids away, industry and the western economy is taking parents away.*

(Fort McKay Workshop 2008)

*Now everyone has their own time lines, their own jobs, you do it for yourself instead of for your family (implied extended family).*

(Fort McKay Workshop 2008)

Partly due to working schedules today, social gatherings, recreation and free time are most often carried out with peers as opposed to mixed age groups of Elders, parents, youth and extended family. This is affecting the transfer of knowledge, traditions, the use of Cree and Dene languages and the relationships youth have with adults and Elders in the Community.

*Kids are invited to the Elder Gathering, but hardly any youth were there because the parents didn't want to pull the kids out of school for a day.*

(Fort McKay Workshop, September 2008)

It also adds to the loss of language that was started at residential schools. The reduced time youth spend listening to their Aboriginal language impedes its transfer to new generations. Elders are no longer able to fulfill the role as primary teachers and more and more young people look to individuals from outside the Community for skills and knowledge that will prepare them for their adult life.

### **Industry has increased access to drugs and alcohol**

The paved road, increased cash, the increased numbers on non-Aboriginal people living in work camps close to Fort McKay and other socio-economic factors associated with a boom economy have increased access to illegal drugs and alcohol. Parents dealing with their own issues have a hard time raising healthy children.

### **Land disturbance has reduced the opportunities to pass on traditional knowledge**

Since the 1960s, there has been a dramatic increase in oil sands development in the central portion of Fort McKay's Traditional Territory boundary (see Figure 8-2) – the area surrounding the hamlet of Fort McKay. People from Fort McKay can no longer use the land around the settlement to support themselves, and opportunities to carry out traditional activities have been reduced.

*Now the only opportunity to learn traditional ways is the Moose Lake retreat.*

(Fort McKay Workshop 2008)

## Industry has affected educational requirements for employment

Prior to the 1960s, many Community members participated in the wage economy by taking on seasonal jobs that occurred out on the land (for example trapping, forest fighting, and operating barges on the Athabasca River). These positions did not have the educational requirements demanded now by oil sands companies. The combined factors of a mixed subsistence-based economy supplemented by seasonal work made the relative importance of formal western education in Fort McKay lower than it is today.

Because the opportunity to live a traditional lifestyle has been limited by industry-led disturbance of their traditional lands, young people have little choice but to attend school in Fort McMurray. This compounds the problem of trying to carry out traditional pursuits: with no time and fewer opportunities to learn and to carry out traditional activities near the Community, traditional knowledge and traditional skills are diminished.

General labour jobs associated with oil sands development require a minimum grade 12 or equivalent. For some, these jobs are not considered adequate long-term roles and Community members feel their ability to benefit from the development of their Traditional Lands is still unrealized. To meet industry job requirements and Community requirements for non-labouring positions, students must complete high school and attend post-secondary institutions. The amount of time and commitment required to be successful in an academic setting limits the time youth can spend out on the land and the time they spend learning from Elders. This effect is greater in Fort McKay because students must attend high school in Fort McMurray or elsewhere.

The Community recognizes the need for formal education in order for their people to participate and excel in the modern economy. The Fort McKay Community Plan (Fort McKay IRC 2006) suggests that Community members would like to see Fort McKay youth managing its companies, and providing professional services (such as nursing and teaching) in the Community.

Almost all students from Fort McKay find the transition to high school in Fort McMurray very challenging. First Nation and Métis students tend to be isolated and graduation rates are low. Racism has discouraged some youth from actively pursuing their culture in favour of fitting in with the dominant society.

*Young people don't want to be First Nation because they will be laughed at, put down. (Our youth) would rather be more "white" or more "black"*

*[referring to rap music and clothes]. White people want everyone to be like them or they will be against you.*

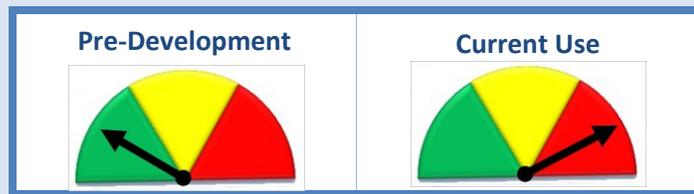
(Fort McKay Workshop 2008)

Not only do some Fort McKay students feel isolated in Fort McMurray high schools, but also the travel time required to attend makes it difficult to get involved in extra-curricular activities or receive help from teachers if needed.

### Loss of land and access

Several important traditional gathering areas have been significantly affected by oil sands development. Tar Island was eliminated by Suncor's first mine and Ena K'erring K'a Tuwe (Cree Burn Lake or Isadore's Lake), which is now under the ownership of the Fort McKay First Nation through the 2006 Treaty Land Entitlement, has an oil sands mine just to the east. Overall, the uptake of land by development has severely limited people's ability to access their Traditional Lands for visiting, harvesting, spiritual activities and recreation. See Sections 8.3.2 and 8.3.3 for a more detailed discussion on land disturbance and access issues.

#### Box 10-1: Reclamation



#### Indicator Summary

##### Stressor: Loss of Land

Reclamation is the main proposed mitigation for oil sands operations; Fort McKay has serious concerns about its ability to provide suitable landscapes for traditional activities (Healing the Earth Strategy, Fort McKay IRC 2010a):

- *Put it back the way it was* - when the land is mined it should be reclaimed to the way it was; however, current reclamation plans are for landscapes with more uplands, few wetlands and many large pit lakes instead of the extensive networks of wetlands, rivers and streams that exist now.
- *Reclamation is too slow* - reclamation starts about 10 years after a project begins, and then even if re-vegetation is successful, it takes an additional 20 to 25 years for these sites to mature into forests. Land reclaimed in the region is currently less than 200 ha of the over 133,000 ha of disturbance. If the land is unavailable for traditional uses for more than a generation, much of the traditional knowledge will be lost.
- *You can't put the spirit back into the land* - when the landscape is reclaimed the land will lose "spirit" and medicines and other plants grown on the reclaimed sites will not be as effective.
- *Reclaimed land will not be safe for animals or people* -decades of living with oil sands mining on their Traditional Lands has provided the Community with examples of air, land and water impacts due to uncontrolled events. There is a concern regarding the health and safety of animals and people who use the reclaimed land.
- *Muskeg is important, water is important* – there are concerns about water quality, both on and off the reclaimed mine sites and the lack of ability to reclaim muskeg
- *Who will be responsible for the land (environmental issues) when mining is finished?* - Fort McKay will remain after mining is completed and is concerned about long-term environmental issues.

Due to these concerns and the lack of successful reclamation to date, the gauge is in the red.

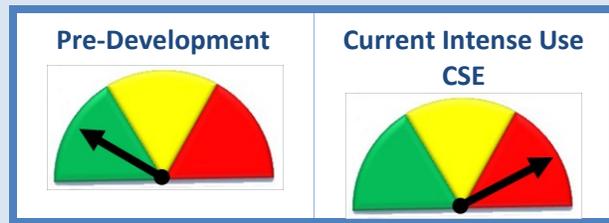
Another huge concern is that the land that has been taken up for development has not been reclaimed; of the approximately 133,000 ha that have been disturbed only a few hundred hectares have received reclamation certification. In general, there is a lag of many decades between when land is first disturbed and when reclamation is planned. As well, the land is not being reclaimed to a pre-disturbance state; long-term plans for reclamation contain limited areas targeted for muskeg (peatlands), have substantially more uplands than existed pre-development and include many large pit lakes in place of natural network of rivers and streams (see Box 10-1).

As a way to offset the loss of land and access, Fort McKay, through its Healing the Earth Strategy has a target of protecting at least 40% of its Traditional Lands from development. Currently, there are only five protected areas in the region (covering about 6.4% of Fort McKay's Traditional Lands) and many of these are not easily accessible by Community members (see Box 10-2).

### Influx of people, goods and services

Visiting in people's homes seems to have also decreased. Youth are encouraged to participate in programs with their peer groups offered at school or the Wellness Centre; similarly, the Elders Centre provides a place for seniors in the Community to gather while youth are at school or with their friends, and older Community members are at work. Community members suggest "In the past you would just drop by – nobody locked their doors.

#### Box 10-2: Protected Areas



#### Indicator Summary

##### Stressor: Loss of Land

Fort McKay has set a Healing the Earth Strategy target of protecting 40% of its Traditional Lands for traditional use.

Currently there are only five provincially protected areas within Fort McKay's Traditional Lands, which comprise about 6.4% of Fort McKay's Traditional Lands:

- Birch Mountains Wildland Provincial Park
- Marguerite River Wildland Provincial Park
- Richardson River Dunes Wildland Provincial Park
- Whitemud Falls Wildland Provincial Park and Ecoreserve
- Quarry of the Ancestors (candidate Provincial Historic Site)

As well, Creeburn Lake, which was transferred to Fort McKay under Treaty Land Entitlement in 2006, has been identified through the Community land use planning process as an area to protect for preservation of culture.

Fort McKay has identified a large area within which specific protected areas could be selected. Within this large area there are currently several constraints to the development of new protected areas; about 30% is already existing or approved projects and if currently tenured leases are developed about 78% of the land could be lost. The remaining land is already fragmented by linear development and more linear development is likely.

In contrast to other indicators, protected areas is a positive indicator; as the amount of protected areas increases, the potential for offsetting losses to traditional use from disturbances is increased and the gauge moves toward green. Since the current level of protected areas is so much below Fort McKay's target and there are many pressures on the land that Fort McKay has identified for potential protection, the gauge is in the red.

Now you need to make an appointment. People lock their doors because they don't know who their neighbours are" (Fort McKay Focus Group January 2009).

The availability of the internet and computers, brought in part by influx of population to the area, has provided technology that erodes face-to-face social interaction:

*Visiting was sharing stories. Now people watch TV.*

(Fort McKay Workshop 2008)

*TV, DVDs, game boys - everyone texting not talking. We used to do chores-make our own life. We used to work together.*

(Fort McKay Workshop 2008)

The exponential growth of regional population levels has led to stress. The regional population is now over 100,000; compared to a few thousand in the 1960s (see Box 10-3). The influx of people, and lagging infrastructure and services affects everything from access to services to traffic. This can affect time available for visiting, child-rearing and education.

The large number of people living and working nearby in work camps causes additional stress – it affects people's sense of safety and well-being. The overall increase of people in the region has affected access to traditional lands as many of the people in the region are also accessing the same resources for recreational purposes (See Section 8.3.3).

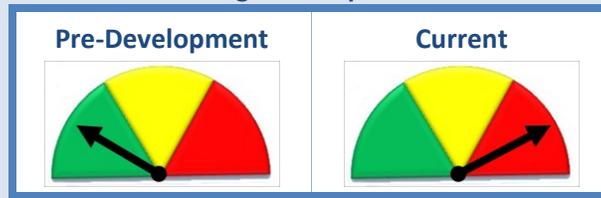
## 10.4 Daily Life in 2008: Linkages with Cultural Values

Community leadership and administration have recognized the many challenges facing Fort McKay parents today. In the last few years a number of programs have been initiated to help parents cope with these challenges. For example, the following youth programs are offered through the Wellness Centre:

- Children's After School Programs
- Supper Program
- Supervised Youth Nights
- Youth Leadership Program
- ***Cultural Programs***
- ***Day camp Programs***

The Community also supports the "Mothers of McKay" and the "Young Mom's Program".

**Box 10-3: Regional Population Trends**

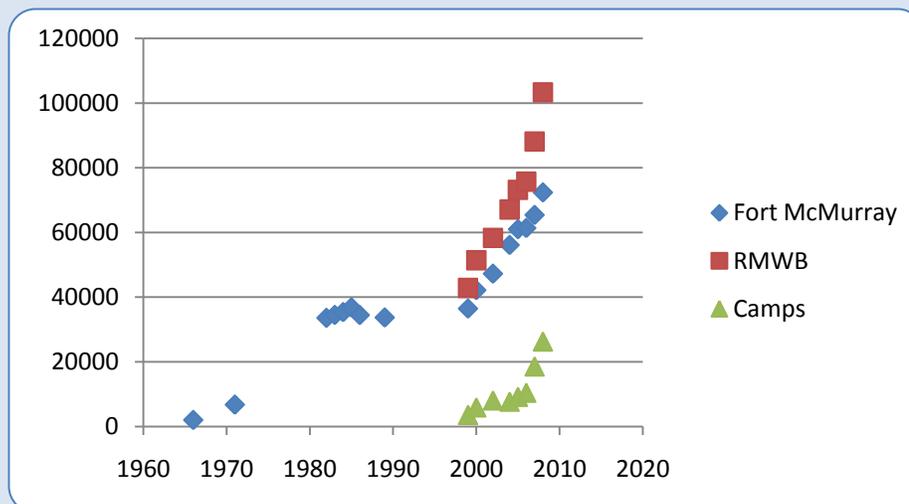


**Indicator Summary**

**Stressor: Increased Population**

In the 1960s the population of Fort McMurray was about 2,000 people. This increased to about 35,000 in the 1980s to about 36,000 in the late-1990s. Since the late-1990s the population in Fort McMurray and Regional Municipality of Wood Buffalo has grown exponentially (see figure below). The current population of Fort McMurray is just over 72,000 and the RMWB is now over 100,000. Also within the region a large number of work camps, many of them located near Fort McKay. Population in work camps was about 3,500 in the late-1990s and has risen to over 26,000 in 2008. The gauge is in the red due to the 3600% increase in population in the region.

Data are from RMWB Municipal Census 1999 and 2008. See Section 9 of the Fort McKay Specific Environmental Assessment (Fort McKay IRC 2010b) for further discussion.



**Human Population Levels in the Regional Municipality of Wood Buffalo, Fort McMurray and Work Camps**

The focus of education has changed in order to prepare Community members for the wage economy. “Now they educate for jobs outside the family, white jobs” (Fort McKay Workshop 2008). The Community, in particular Elders, no longer plays a major role in terms of passing on knowledge and skills. “It depends on you to teach your kids. Before [education] was more a Community or extended family matter” (Fort McKay Workshop 2008). These changes in education have shifted the focus

from traditional values to western values and pursuing individual benefits rather than Community benefits.

Gatherings continue to play an important role in the cultural and social life of Fort McKay people. In the summer of 2006, Fort McKay First Nation hosted its first regional gathering. For many First Nation communities, Treaty Days or religious events (e.g., Lac St. Anne pilgrimage) may also function as gatherings. In Denesuline territory, a different Community hosts the Dene Gathering each year. The cultural and political tenor of these modern gatherings remains true to the traditional roots of such events.

Visiting as a general practice has changed in the way and amount that it takes place. Due to work schedules, the time of the year when visiting take places is not as relevant as it once was and group composition and the activities carried out during visiting have also changed.

The following core cultural values have been weakened or changed as a result of changes in child-rearing, education and visiting:

#### 10.4.1 Tradition

“Family members are responsible to teach traditional ways. This is not happening because to live now two parents need to work to get enough money. Because they are working, the parents don’t know, and kids can’t speak to their grandparents” (Fort McKay Workshop 2008). An important part of the traditional way of raising children was transferring of the knowledge, language and values in general. The loss of language is related to the loss of tradition: “Industry is taking away the language indirectly because parent’s jobs don’t allow them to spend as much time with kids. Industry is taking the family structure apart” (Fort McKay Focus Group January 2009). “Need language to keep the traditions alive. If they can’t understand you, they can’t learn” (Fort McKay Workshop 2008).

Tradition is one of the values that have been affected the most by the change in education systems due in part to the rapid expansion of the wage economy and the destruction of the land that does not allow the Community to rely on the traditional economy. As described earlier, fewer young people have the time or opportunity to carry out traditional pursuits. As a result, traditional knowledge and traditional skills are diminished.

There are still opportunities to pass on traditional ways such as the Moose Lake retreat, the regional gathering and the camp at Lac St. Ann. However these events are limited and fall outside the norm of day-to-day living. Rather than being part of the natural order of the Community, it involves extra effort from those interested in learning about traditional culture. “Young people that want to learn traditional ways seek knowledgeable people”.

**Value - Tradition: Weakened since 1964**

### 10.4.2 Self-Reliance

Community members recognize the link between education, a good job and money in order to provide for themselves and their family. However, the element of money and need to purchase goods from a store in Fort McMurray have weakened their traditional perception of and value of self-reliance independent of the wage economy.

**Value - Self-reliance: Weakened since 1964**

### 10.4.3 Rootedness, Rhythm of Nature, Purpose, Peace and Connectedness

The way people care for others, especially children, has also been changed considerably: “Parents feel guilty for leaving their kids at home so they buy them stuff...” (Fort McKay Workshop 2008).

The link between raising children and the spiritual values have also been eroded: “We would spend time together and give thanks. Now we don't eat together, don't spend time together –Not even on special holidays because you can get double-time...” (Fort McKay Workshop 2008).

Land and spiritual based values have decreased with the changes in education systems. Western schooling takes up most of young people's time. When not in school, traditional teachings must compete with television and video games.

*Ceremonies help learn and pass on the knowledge. Now there are no values left; young people don't get into it.*

(Fort McKay Workshop 2008)

*There are a lot of things that keep kids busy; that is why they learn the dance but not the meaning, because they don't sit to listen, they don't get the spiritual aspect of the dance. There are other interests so they lose interest in the culture.*

(Fort McKay Workshop 2008)

The Community believes that the loss of traditional social structure and way of life, and therefore the modification of the way the Community raises their children, has reduced the link to the values of respect and rootedness:

*Kids had more time with parents in the past, to bond with parents, respect, and they know to listen”. “Kids often don't know how to respect within the community.*

*Respect for those dying and sick are decreasing, maybe due in part to the rising number of people sick and dying at younger ages.*

(Fort McKay Workshop 2008)

**Values - Rootedness, rhythm of nature, purpose, peace and connectedness: Weakened since 1964**

#### 10.4.4 Cooperation and Cohesion

Cohesion/Bonding has changed considerably as intergenerational relationships weaken due to the reduction of time and cooperation between Community members: “Kids used to do chores after school and now kids go to the Wellness Centre after school and do field trips and stay with friends. The Wellness Centre is good for bonding” (Fort McKay Workshop 2008).

There are some strong links between education and the acquisition of knowledge and skills, and values such as respect, cooperation and cohesion. When asked “What do people get out of going to school?” Community members answered: “school is knowledge, a good job, and good role models. (You learn how to) try your best, try hard, treat others like how you want to be treated” (Fort McKay Focus Group January 2009).

Community Cohesion/Bonding is still the primary value instilled through visiting. What has changed in the way people visit is the composition of the groups and therefore the bonding between different age groups. People visit more their peers within their own age group (for example, from work, school or in the Elders centre).

**Values - Cooperation, cohesion: Maintained since 1964**

#### 10.4.5 Respect

The perception of the Community is that the western schooling system does promote respect: “I learned about respect, but I learned in school”. However, the Community perception is that respect in school is understood in a narrower sense than their tradition dictates: respect to life, community, nature and the spiritual world including their ancestors. “In [traditional] camps you learn about the simple things: to appreciate, to thank and then to share and respect” (Fort McKay Workshop 2008).

**Value - Respect: Weakened since 1964**

#### 10.4.6 Peace and Purpose

The changes in visiting (less time spent, less intergenerational mixing) have affected spiritual values such as Peace and Purpose. The loss of language affects values related to the Creator: “Language comes from Creator. I pray in my own language and he understands me” (Fort McKay Workshop, September 2008).

**Values – Peace, purpose: Weakened since 1964**

## 10.5 Summary: Cultural Impacts on Daily Life by Industrial Development

Without the direct and constant involvement of parents and Elders, the linkage between the activities of daily life – child rearing, education, visiting - and core cultural values has been weakened. The values of rootedness and connectedness are no longer strong because there is no association with raising children. A link still exists (though feeble) between Land- and Creator-related values due to Community efforts to develop cultural programs and the few opportunities that families have to spend time together in the land (berry picking, Moose Lake excursions).

Due to the need for full-time wage employment and its educational requirements, the role of the Community in education has changed. This is reflected the weakening of the traditional values of self-reliance and respect.

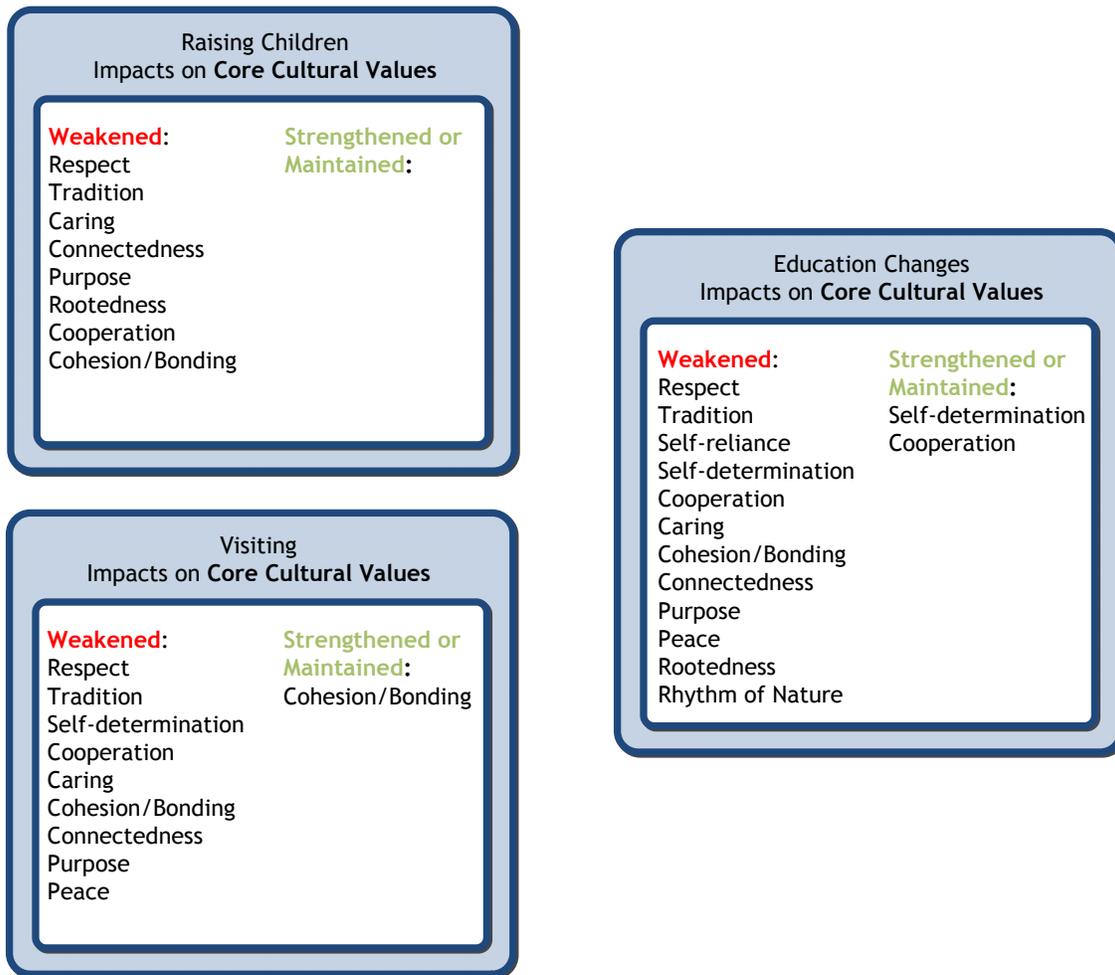


Figure 10-1: Impact on Cultural Values since 1964—Daily Life

## 11.0 Significance Assessment and Conclusions

### 11.1 Introduction

This Cultural Heritage Assessment draws together findings from multiple sources to express, more comprehensively than has been done in the past, the influence of industrial development on the Community of Fort McKay. It is designed to determine the significance of development impacts upon the cultural heritage and values of people of Fort McKay *as determined by the people themselves*.

This assessment of significance is consistent with guidance from the Canadian Environmental Assessment Agency regarding the Canadian Environmental Assessment Act (CEAA), which indicates that the determination of significance and the related matters includes effects on physical and cultural heritage and current use of land and resources for traditional purposes by Aboriginal persons if these are caused by changes to the environment from the project(s) being assessed (CEAA 1994). In this baseline report a specific project is not being assessed. However, this significance assessment provides the existing context and a significance assessment process upon which specific projects can be assessed.

### 11.2 Defining Significance

Fort McKay is utilizing a comprehensive approach to assess significance that takes into consideration qualitative information coupled with quantitative data when appropriate and available. Fort McKay's experience is that numeric assessments alone rarely adequately and meaningfully reflect the experience of the Community and the effects on the Community's cultural heritage. Thus, interviews with Community members effectively convey the challenges of living adjacent to industrial development in a way that numeric information alone cannot. Qualitative information augmented with quantitative data on measurable parameters can assist in determining degree of change in culture and values.

Significance, in terms of industrial impacts on the cultural heritage of Fort McKay, is defined in this assessment as being those impacts that:

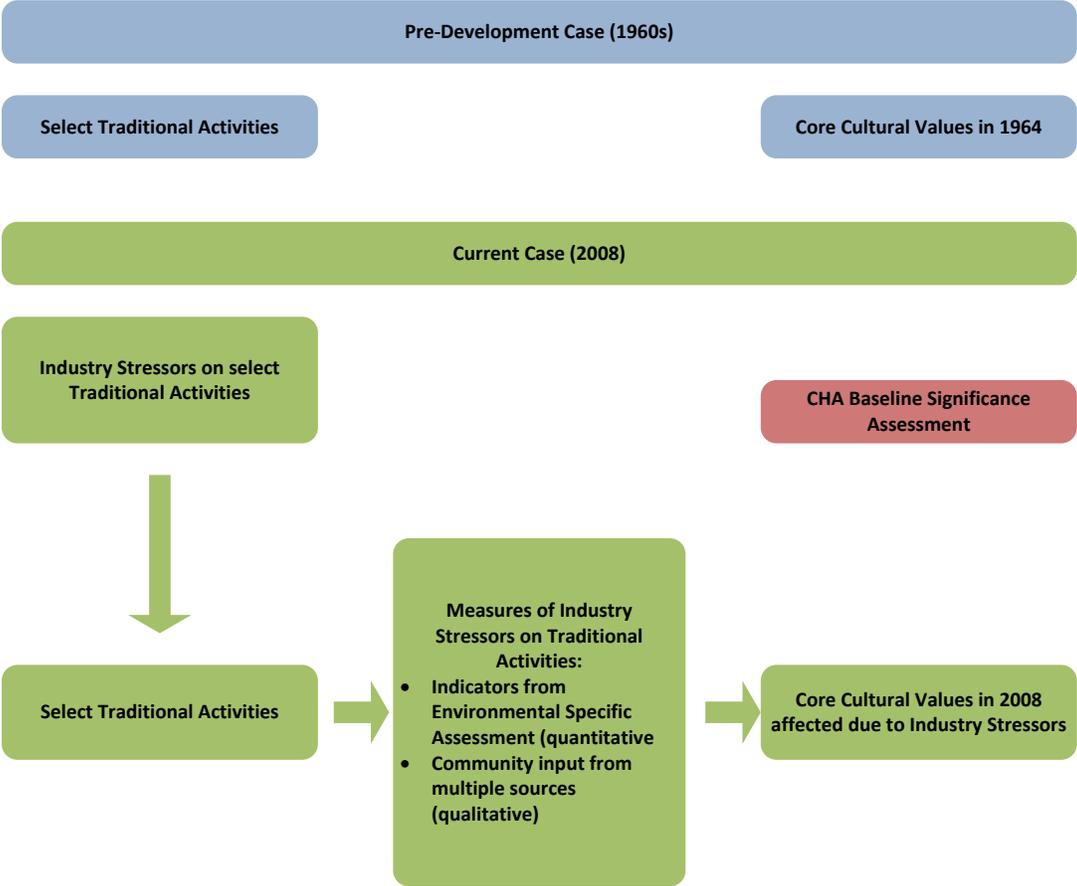
*Impact Community opportunities to use their Traditional Lands and carry on traditional activities and are therefore of strong concern and consequence to the Community in terms of maintaining their cultural heritage and values.*

### 11.3 Determining Significance

As shown earlier in this report, this assessment of the significance of oil sands development on Fort McKay's cultural heritage was developed by:

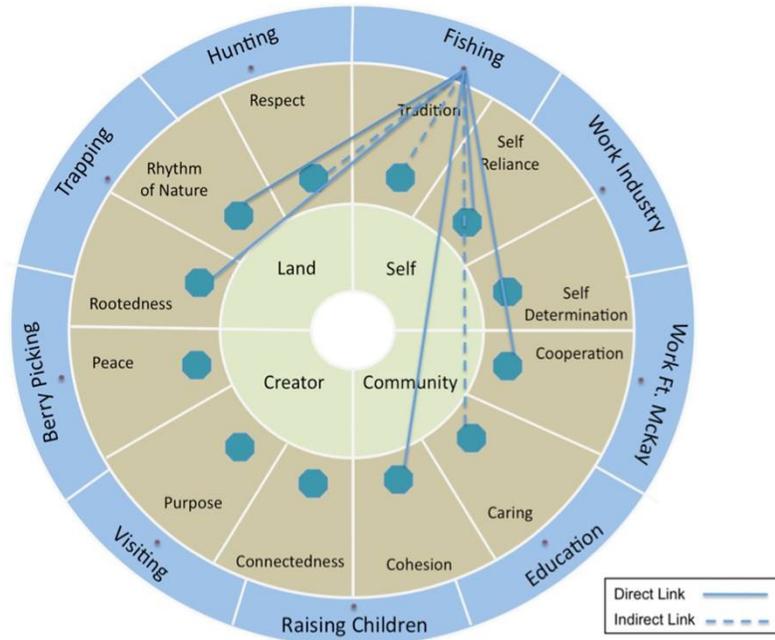
- **Step 1:** Articulating select Traditional Activities used as indicators of cultural values and cultural heritage;
- **Step 2:** Articulating the changes in the core cultural values from pre-development to current.
- **Step 3:** Linking Community perceptions of various environmental parameters with the Traditional Activities and identified stressors; and,
- **Step 4:** Linking the Community perceptions of environmental parameters with existing quantitative data on environmental indicators.

Figure 11-1 portrays the pathway that Fort McKay utilizes to assess significance of changes caused by industrial stressors on their cultural heritage. Simply put, industrial development impacts Traditional Activities, which in turn impact cultural heritage.



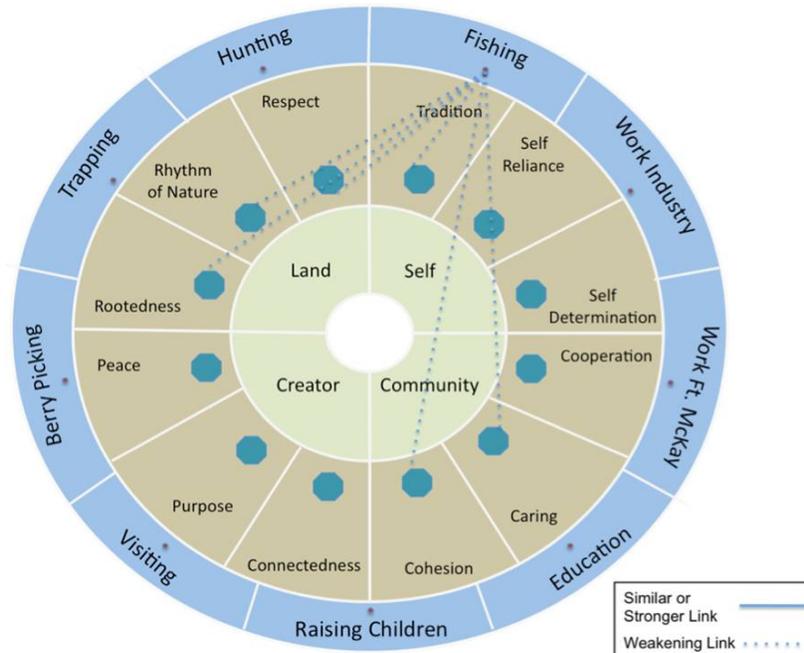
**Figure 11-1: Pathway that Fort McKay Employs to Assess Change Caused by Industry Stressors on their Cultural Heritage**

Figure 11-2 and Figure 11-3 show the linkages between land based Traditional Activities, stressors on the ability for people to carry out those activities and ultimately the impact this has on the Community cultural values.



**Figure 11-2: Model of Linkages between Select Traditional Activities and Cultural Values in 1960s (pre-development)**

Cultural heritage exists within a complex interrelated context of environmental, cultural, economic and social influences. The suite of Traditional Activities that help support and maintain Fort McKay cultural heritage are situated within this context, and are difficult to isolate from one another. The inextricable linkage among activities that support Community cultural heritage means that stressors influencing one activity have potential ramifications for another. Because of these connections, what may appear to be a minor change in one area may have larger and unanticipated consequences for the whole.



**Figure 11-3: Model of Linkages between Select Traditional Activities and Cultural Values in 2008 (Current)**

Thus, this assessment identified the following impacts on culture and values:

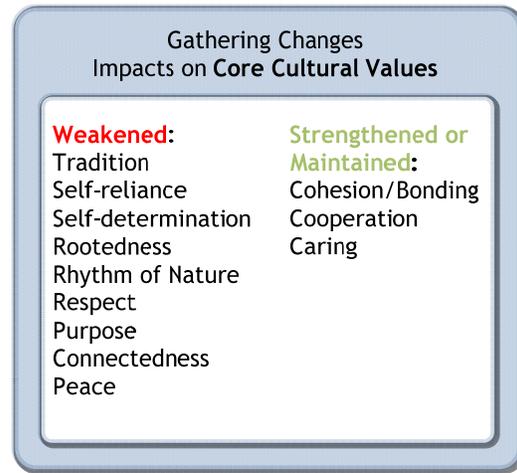
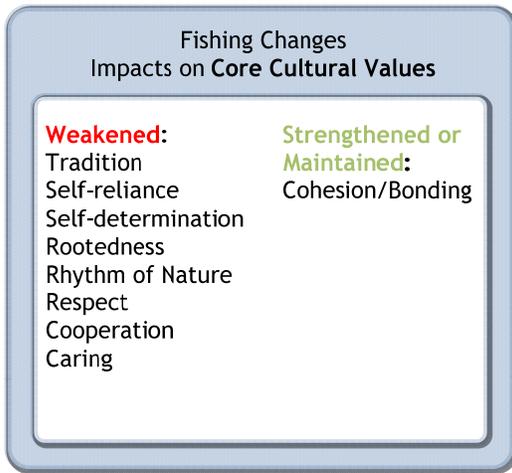
- Industrial activity has led to decreased opportunity for Community members to carry out traditional harvesting activities. In turn, the decrease in traditional harvesting activities (Hunting, Trapping, Fishing, Gathering) has led to the following impacts on cultural values:

**Hunting Changes  
Impacts on Core Cultural Values**

<b>Weakened:</b>	<b>Strengthened or Maintained:</b>
Tradition	Cohesion/Bonding
Self-reliance	
Self-determination	
Rootedness	
Rhythm of Nature	
Respect	
Cooperation	
Caring	
Purpose	
Connectedness	
Peace	

**Trapping Changes  
Impacts on Core Cultural Values**

<b>Weakened:</b>	<b>Strengthened or Maintained:</b>
Tradition	Cohesion/Bonding
Self-reliance	Rootedness
Self-determination	Respect
Rhythm of Nature	Cooperation
	Rhythm of Nature



- Industrial activity has decreased the opportunity for Community members to carry out traditional harvesting activities. This decreasing opportunity, when coupled with Community members seeking full time wage employment with industry, has led to the following impacts on cultural values:



- Industrial activity has led to decreased opportunity for Community members to carry out traditional harvesting activities. In turn, the Community members are forced to participate more intensely in the wage employment which in turn has led to changes in daily life (Child rearing, Education, Visiting) which in turn has led to the following impacts on cultural values:

**Raising Children**  
Impacts on **Core Cultural Values**

<b>Weakened:</b> Respect Tradition Caring Connectedness Purpose Rootedness Cooperation Cohesion/Bonding	<b>Strengthened or Maintained:</b>
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**Education Changes**  
Impacts on **Core Cultural Values**

<b>Weakened:</b> Respect Tradition Self-reliance Self-determination Cooperation Caring Cohesion/Bonding Connectedness Purpose Peace Rootedness Rhythm of Nature	<b>Strengthened or Maintained:</b> Self-determination Cooperation
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**Visiting**  
Impacts on **Core Cultural Values**

<b>Weakened:</b> Respect Tradition Self-determination Cooperation Caring Cohesion/Bonding Connectedness Purpose Peace	<b>Strengthened or Maintained:</b> Cohesion/Bonding
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Taking into consideration the qualitative Community input, the linkages with Community core cultural values and quantitative indicators, the Community of Fort McKay believes that the current impact to their cultural heritage is significant and adverse.

## 12.0 The Path Forward – Addressing Adverse Effects on Fort McKay’s Cultural Heritage

The ways people meet their needs, carry out their daily rituals, and organize and express themselves make up their culture. Cultural patterns emerge through a dynamic, interactive process involving belief systems, past and present needs and interests, and future dreams (Maehr & Stallings 1975). Cultures (and thus cultural values) change naturally and in response to many socio-economic and environmental stressors.

The identity of the Fort McKay people is rooted in time and place to the land:

*“Since time immemorial we have roamed this land, lived from this land, and been part of this land. To separate us from this land would be to split our very identity in two” (FMTA 1983: 1).*

This tie to the land is not unique to Fort McKay. Other Aboriginal peoples experience have a similar perspective: that traditional land use is the means by which their system of social and economic relations, the values associated with them and the viability and identity of their community are maintained; that traditional land use arises not from the desire to accomplish certain narrow economic ends, such as bringing home food, but from the values and relationships that traditional land use sustains (see NWRCG 1997).

The people of Fort McKay believe industrial development is limiting their ability to carry out cultural activities on their Traditional Lands and that this is significantly affecting their collective and individual identity.

In response to these significant adverse effects on the Community’s cultural heritage, Fort McKay is faced with determining how to:

- minimize adverse industrial project-specific and cumulative effects; and,
- bolster the retention of their cultural practices.

Not only is the scale of regional development substantial, the pace is markedly increasing, requiring a clear long-term strategy that takes into consideration both current and future Community needs. The discussion below outlines some strategies that Fort McKay must consider in order to re-capture and maintain the cultural heritage of the Community.

### Cultural Resilience

The Community’s ability to adapt to environmental change while simultaneously supporting their cultural heritage and values is linked with maintaining or regaining sovereignty over how associated issues are addressed. University of Victoria

Psychology Professor, Christopher Lalonde, recently examined cultural resilience and identify formation in Aboriginal communities and found that “when communities succeed in promoting their cultural heritage and in securing control of their own collective future – in claiming ownership over their past and future – the positive effects reverberate across many measures of youth health and well-being” (LaLonde *In Press*: 23).

Fort McKay’s communal cultural resilience hinges on the ability of the people of Fort McKay to actively influence the events taking place on their Traditional Lands. Lalonde further summarizes that “Cultural resilience is not simply a ‘situational success or failure’ (Bartelt 1994). The association between community efforts and outcome shows that instances of success are not random...the best chances for success lie in the efforts of First Nations to reassert cultural sovereignty and to expand the Aboriginal knowledge base that has allowed them to adapt to, and in some cases, overcome the climate of adversity (Lalonde *In Press*: 24).” With the aforementioned in mind, it is essential that Fort McKay has meaningful and effective input when determining mechanisms to offset the effects of regional industrial development.

Fort McKay would like to develop systems and programs aimed at replacing the individual and Community health and well-being that is no longer achieved to the same extent through traditional pursuits and way of life (see also the Fort McKay review of the Socio-Economic component of Shell’s Pierre River Mine and Jackpine Mine Expansion, Molstad and Anderson 2010).

## Reclamation

Mine related land disturbance, even when accounting for reclamation, will result in a minimum of two to three generations<sup>11</sup> of Fort McKay Community members without access to significant portions of their Traditional Lands. Reclamation is sometimes referenced as a mitigation measure for impacts on traditional land use resulting from project development (e.g., Suncor Energy 2007). However, oil sands projects typically have a lifespan of 25-50 years (sometimes longer) from pre-construction to closure during which time little to no land access is possible for the Community. Even at closure, reclamation activities will not result in a landscape that resembles pre-disturbance conditions. According to Shell Canada Limited (2007b), a site is “considered to be restored if natural succession processes are restored” and does not require the establishment of a site to a mature stage. While these areas may be on a trajectory towards recovering biological diversity and function at the time reclamation certification is granted, they will likely not be suitable for a pre-disturbance range of traditional activities. This further extends the duration of impact beyond the estimate 25-50 years (two the three generations). Ultimately, this disturbance impact reaches into the far future with regards to cultural heritage.

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<sup>11</sup> The length of a generation is defined as 20 years (Ohno 1996).

Further demonstrating the uncertainty of reclamation to mitigate effects on cultural heritage is the fact that there are no Fort McKay Community members currently engaging in traditional practices on the small portion of publically accessible reclaimed land (i.e., land adjacent to the Wood Bison Trail). If indeed, reclamation was a viable mitigation measure for traditional land use, we would expect to see evidence of cultural use on these sites. This lack of desire to use these sites is due in part to the active development taking place on adjacent sites, and the perceived health risks with associated development activities. As reclamation occurs on small tracks of land, rather than across a larger area, it is unlikely that Community members will be interested and willing to utilize many reclaimed sites as soon as they are certified. Rather, people need safe access to biologically rich, ecologically functional land to carry out traditional activities and this requires large areas of land, free from disturbance, that support culturally valued species.

Fort McKay has developed the Healing the Earth Strategy, to guide the Community's engagement in environmental activities (Fort McKay 2004). Structured under four strategic areas – retention, reclamation, improvement, and offset – the Community seeks to ensure that their Traditional Lands are managed in a way that addresses Community environmental concerns and respects Community values. Reclamation, which focuses on providing habitat that supports pre-development land use, helps guide Community input into the reclamation process on their Traditional Lands.

### Language Retention

Establishing programs and practices to support ongoing usage of Cree and Dene is of high importance to Fort McKay. Communication of cultural knowledge using their Aboriginal languages is no longer a common practice in the Community. According to Statistics Canada, approximately only 8% of Fort McKay residents most often speak a language other than English in their homes (<http://www12.statcan.gc.ca/> accessed September 14, 2009). The average age of Community Cree and Dene speakers is rising, and younger children rarely speak their Aboriginal language fluently. Continued knowledge of such things as traditional place names, names and uses of traditional resources and a sophisticated awareness of rich meaning of cultural practices are at high risk of being lost without utilization of Aboriginal languages. As such, the Community is currently identifying steps to bolster Aboriginal language retention and practice.

### Land-based Employment

Community employment, particularly for young people, tends to be selected based on the current opportunities that people see available to them. This has resulted in many youth indicating that they may want to drive a heavy hauler truck, for example, because this is a job they continuously see and hear about. However, Fort McKay would like to realize more land-based employment such as tourism and guiding. The Community recognizes there are significant potential economic

development opportunities that can be created within their Traditional Lands that connect with Community cultural values.

### **Further Development and Documentation of Cultural Heritage Baseline**

The process of preparing the CHA Baseline revealed the complexity of the undertaking as well as the need for detailed and appropriate integration of social, economic, and health indicators. Further data and documentation will provide a richer, and more comprehensive, meaningful assessment for the Community of Fort McKay. Fort McKay looks forward to the opportunity to further develop the CHA Baseline and, in turn, future project-specific cultural heritage assessments.

During workshops and focus group conversations related to this report, Community members discussed the development of additional indicators that could be applied to particular cultural attributes as a way to further monitor changes to cultural heritage. Potential indicators may include measures such as the amount of time spent hunting or distance travelled from Fort McKay to reach hunting locations. Development of these qualitative and quantitative indicators requires planning meetings and additional workshops with Community members. Fort McKay would like the opportunity to establish and monitor these indicators in the future.

### **Cumulative Effects and Regional Initiatives**

Fort McKay has established environmental and socio-economic agreements with regional industrial operators for most existing and approved oil sands projects. While items in the agreements address some of Fort McKay's social, cultural, environmental and economic concerns, they do not resolve all of the issues and have not stopped the increasing loss of land to oil sands and other development. Many issues are simply too complex or far-reaching to be dealt with on a lease-by-lease basis or by individual companies. Rather, a more comprehensive approach that takes into consideration rights and interests throughout the Community's Traditional Lands is necessary.

With the above in mind, Fort McKay has been an active participant in a great number of regional initiatives that were and are intended to support the Community's interests, including maintenance of their cultural heritage. However, whether the Lower Athabasca Regional Plan (LARP) the Moose Lake Access Management Plan (AMP) and other initiatives aimed at addressing regional cumulative impacts will alleviate the negative impacts of industry and other cultural stressors is not yet known.

Through Community participation in the LARP, Fort McKay, in part, hopes to ensure sufficient land is protected so Community members are able to meaningfully exercise traditional land use practices within reasonable proximity to Fort McKay. Fort McKay has created a Protected Areas Strategy, which has been brought forth for use in the LARP. (The LARP is one avenue the Community uses to advance

interests related to protected areas). The Community's needs with respect to protected areas include the following:

- To dedicate approximately 40% of the land within Fort McKay's Traditional Lands as protected areas;
- Protected areas for traditional land use within close proximity to the Community;
- Ensure that protected areas support healthy viable populations of plants and animals;
- Protect historical and culturally significant sites;
- Where development is approved, monitor, minimize and manage the cumulative effects of those projects and other changes in the region
- Ensure the land use that occurs on Crown lands surrounding the Community and Fort McKay's reserves is compatible with the land use within the Community and on-reserve;
- Participate in the management, including use and access, of Fort McKay's Traditional Lands

The Moose Lake AMP process is designed to maintain Aboriginal access on their Traditional Lands and manage increased non-Aboriginal access. Fort McKay continues to press for the implementation of an AMP to the area surrounding two of their reserves in the Birch Mountains (I.R. 174A and 174B) adjacent to Namur and Gardiner Lakes, often referred to as the "Moose Lake area", to protect their use of this culturally valued region. Should a corridor be built on the east side of the Athabasca River (East Side Corridor), Fort McKay would like to collaborate with government and industry on an east side AMP. Among the Community's interests, related to access management, are the following actions:

- The reduction of barriers to Community members in terms of access to Traditional Lands and Traplines;
- Imposition of barriers (through signage, education and better design) to Traditional Lands and Traplines for non-Community members; and
- Increasing the availability of harvestable lands for the sole use of Community members.

As well, regional environment-related initiatives are one opportunity to address issues related to developmental effects on the environment which in turn affects and influences Fort McKay's cultural heritage. Fort McKay has and continues to be an active participant in the Cumulative Environmental Management Association (CEMA) and regional monitoring groups (e.g., Regional Aquatics Monitoring

Program and the Wood Buffalo Environmental Association). Although the work of these groups is helpful for governments and industry to understand environmental effects, this understanding in itself does not mitigate these effects. To that end, Fort McKay has provided recommendations in the Fort McKay Environmental Specific Assessment with regard to specific environmental effects (e.g., land disturbance, wildlife, odours, etc.). It has yet to be determined if these recommendations will be implemented.

## Cultural Heritage Strategy

Further work is necessary to comprehensively address the significant adverse effects of industrial development on Fort McKay's cultural heritage. For example, establishment of a Community-developed Cultural Heritage Strategy is required to provide a clear approach to support and retain the Community's cultural heritage related needs.

Development of such a strategy requires further Community member input and discussion under the guidance of Fort McKay leadership. To best address cultural heritage, governments must consult with Fort McKay on how best to mitigate, compensate and accommodate adverse effects that the Community is currently experiencing on cultural heritage and opportunities for traditional land use. Actions that Community would like to include in the Cultural Heritage Strategy, and are not limited to:

- Development of a Community Cultural Atlas – an updated Traditional Land Use and Occupancy Study for the Community of Fort McKay – as one mechanism to help capture and maintain Traditional Environmental Knowledge related information;
- Creation of Traditional Place Names Map; and
- Ongoing support for youth cultural programs and camps.

As mentioned throughout this report, there has been a significant loss of opportunity for Community members to carry out cultural practices on their Traditional Lands. Industrial development has taken place at such a rapid pace over the past 40 years that people have had very little time for responding and transitioning during this period. In fact, the Community is still in transition. There has been limited opportunity throughout this 40-year period for the Community to guide their response to these changes with the result being that many Community members feel disempowered, helpless. Fort McKay has only recently begun to build their capacity to address the changes taking place around them. It is the Community's goal to have not only the capacity to address environmental, social and cultural impacts but to build their capacity economically to restore in their Community a quality of life that allows its members to still embrace their culture.

The measures discussed above will only partially moderate or off-set the loss to Fort McKay of its traditional land use opportunities, cultural heritage and ability to exercise their Treaty and aboriginal rights; further accommodation measures need to be developed in consultation with Fort McKay.

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