



Fort Chipewyan Métis Local 125  
Métis Nation of Alberta  
<contact information removed>

May 29th, 2017

Dear Mr. Bolton:

The Fort Chipewyan Metis Local 125 (“FCML 125”) met with Candace Anderson (CEAA Crown Consultation Coordinator for the Frontier Project) on February 6th by email and by phone a few days later. The purpose of the meeting was to ensure that we were aware of the Frontier Oil Sands Mine Project Joint Review Panel Information Request Package #4, which was issued on February 3, 2016. During the meeting, Ms. Anderson drew our attention to Joint Review Panel Information Request 4.3 in which the Panel requests information regarding Aboriginal-led cultural impact assessments. Ms. Anderson encouraged us to follow up with the Panel directly regarding the FCML 125 Cultural Impact Assessment as the Panel may not have knowledge that the assessment exists.

We understand that Teck has reviewed the FCML 125 Cultural Impact Assessment and that the assessment has informed Teck’s responses to information requests from regulators and the Panel. More importantly, we would also like to take this opportunity to confirm that the FCML 125 Cultural Impact Assessment (along with the FCML 125 traditional land use study and other FCML 125 submissions regarding the Frontier Project) have directly informed the terms of the Participation Agreement that we concluded with Teck in the fall of 2016. Although the details of the Agreement remain confidential to Teck and the FCML 125, the Agreement is intended to mitigate and accommodate Project specific impacts of the Frontier Project on the FCM, including cultural impacts. Further, Teck has committed to the FCML 125 that as Teck advances the Project, community input (including any additional studies) will continue to inform the development of the Project (including mitigation and management measures).

As background, Teck approached the FCML 125 about a FCM-led cultural impact assessment for the Frontier Project in May 2014. Teck and FCML 125 agreed on a scope of work and budget for the assessment and FCML 125 completed the assessment in November 2015. The completed assessment was provided to Teck on November 13, 2015 and FCML 125 requested that Teck keep the assessment confidential. As cultural impact assessments are new for the oil sands region, FCML 125 had concerns about how the information provided in the assessment may be used in the regulatory process for the Frontier Project or other regulatory processes in the region. Upon further consideration of the useful information provided in the FCML 125 Cultural Impact Assessment, we have decided to consent to sharing it with CEAA and for posting on the public registry. We hope the Panel will include it in informing their deliberations on the proposed Frontier project. We trust that this letter has provided the Panel

with appropriate clarification regarding the FCML 125 Cultural Impact Assessment for the Frontier Project.

Yours sincerely,  
<Original signed by>

Mr. Fred (Jumbo) Fraser, President  
Fort Chipewyan Métis Local 125

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# Fort Chipewyan Métis, Local 125 Cultural Impact Assessment

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October 30, 2015

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## Distribution

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October 30, 2015

File: Project No. FCMCIA-14

Fort Chipewyan Métis Local 125

**ATTENTION: Mr. Fred Fraser, President**

**REFERENCE: Fort Chipewyan Métis Local 125**

**Cultural Impact Assessment**

Dear Fred:

Please find attached Integral Ecology Group's final report for the Fort Chipewyan Métis (FCM) Local 125 Cultural Impact Assessment (CIA). This report presents an assessment of project-specific and cumulative cultural impacts on FCM, with specific attention directed at the Teck Resources Limited's (Teck) Frontier Oil Sands Mine Project (Frontier Project) Update. The work is also intended to lay the foundation for the FCM to further study, assess and monitor the effects of regional development on FCM culture. Please see Section 8 for suggested mitigation actions to address current and anticipated effects on culture.

Yours sincerely,

<Original signed by>

---

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## ACKNOWLEDGEMENTS

We would like to thank the Fort Chipewyan Métis (FCM) Local 125 focus group participants who so generously shared their time and expertise throughout the development of this study. The FCM focus group is composed of FCM members who willingly met to discuss the project and provide their insights that have informed the cultural impacts and drivers being assessed in the study. We greatly appreciate the traditional knowledge and observations that they shared. We hope this study supports the cultural aspirations of FCM community members now and into the future.

## LIMITATIONS AND TERMS OF USE

This report for the *Fort Chipewyan Métis (FCM) Local 125 Cultural Impact Assessment (CIA)* is intended to inform the Provincial reviewers and Federal regulators of project-specific and cumulative impacts on, and concerns of, FCM for Teck Resources Limited's (Teck) Frontier Mine Project (Frontier Project) Update. It is expected that this report will be submitted in its entirety to provide Provincial and Federal regulators with a summary of the Cultural Impact Assessment (CIA) initial findings. The FCM CIA is a companion study to the FCM *Land Use & Ecological Knowledge Study* completed by Woven Paths Consulting Ltd. on behalf of FCM. Together these studies address the linked expressions of culture and the land, and they seek to assess the potential Project-specific and cumulative effects on culture and traditional land use. The traditional knowledge and cultural information herein remains the intellectual property of FCM and its members.

## EXECUTIVE SUMMARY

Since the 1960s, the ongoing and cumulative uptake of land for oil sands projects and related industrial expansion has had a rapid and profound impact on the traditional lands and potentially cultures of First Nations and Métis people in northeastern Alberta (Behr et al. 2014, FMIRC 2010). It is only recently that projects undergoing regulatory review have been required to consider impacts to cultures along with impacts to biophysical parameters. Nonetheless, Aboriginal people have long been concerned about the profound cultural shifts that are occurring as a result of changes to their lands and the land-based resources on which they have traditionally relied, although to date no government body has called for monitoring of such changes. Large-scale land disturbance may have led to significant changes to the quality, availability, and access to traditional resources, as well as to elements of Aboriginal cultures, such as knowledge transmission, languages, and expression of shared values. Few studies comprehensively address shifts in culture and their meanings as a result of large-scale land disturbances using rigorous and defensible methods. Further, no monitoring programs exist in the region to assess changes in culture through time. To understand the nature and extent of changes to culture brought on as a result of industrial development, further examination of the complex cultural meanings and values that the land holds for local Aboriginal people is needed.

The goals of this study were to:

1. Identify key aspects of FCM lifestyle that are valued in FCM culture and develop indicators for cultural assessment;
2. Identify key changes in lifestyle (and drivers for this change) that arise from cumulative industrial development and may arise from the proposed Frontier Project development;
3. Conduct an assessment of cultural impacts that considers past, current and future changes in culture; and,
4. Identify what FCM members believe is required to support their culture in light of continued development.

These goals were achieved in partnership with the Fort Chipewyan Métis (FCM) Local 125 community. This study is conducted concurrently and in close association with the FCM Land Use and Ecological Knowledge Study (FCML 125 MLU/EK Study). It is complementary because it discusses impacts to people and the land as a result of industrial development. This CIA study places prominence on cultural elements and widens our understanding of cultural impacts that are intangible (FCM identity, spiritual beliefs, and traditional knowledge) that may not be captured within the geographic or spatial approaches used in

the FCML 125 MLU/EK Study. Further, the FCML 125 MLU/EK study is drawn upon to assess potential cultural impacts (tangible and intangible) that may arise if the proposed Frontier Project moves forward with development.

This study was organized into five stages

- Stage 1: Scoping and literature review,
- Stage 2: Develop cultural template and indicators,
- Stage 3: Identify changes and drivers (cumulative and project-specific),
- Stage 4: Determination of significance, and
- Stage 5: Identify options for mitigation.

Core to undertaking these stages was defining what aspects of culture are important to FCM. This was done through a participatory approach where FCM members identified core aspects of culture they value either as individuals or collectively as a member of the FCM community. From this, a Cultural Template was developed identifying key components of FCM culture that are valued by FCM. These components were used to define a pre-development baseline of cultural change and indicators for assessing cultural impacts. The components of culture valued by FCM that we explore in this report are summarized in Table ES-1.

Table ES-1 Components of culture valued by FCM explored in this report

<b>Identified components of FCM culture</b>	<b>Description</b>
Wellbeing	FCM value sense of their welfare, sense of self, and sense of their relation and experience of place
Traditional knowledge & Language	FCM value traditional knowledge, skills, language, and history related to living on the land that are shared through stories, and teachings.
Providing	FCM value the ability to support themselves and their families with the essentials for a healthy life.
Gathering, Visiting and Sharing	FCM value the places, events, and opportunities that participants have to come together to share aspects of FCM culture, such as songs, stories and food.

These components of culture valued by FCM were used to identify key changes and their drivers in culture since the onset of industrial development (cumulative effects) and the potential impacts (and drivers) from the proposed Frontier Project (Stage 3). Cultural impacts as a result of cumulative effects included, but are not limited to:

- Loss of sense of peace and opportunity to de-stress as a result of uncertainty in future opportunities to have places to conduct land based practice, as well as from odours, light pollution and other visual disturbances;
- Reduced access to places on the land due to low water levels;
- Stories become disconnected from their associated places and activities as a result of decreased access to specific locations on the land;
- Documented or perceived environmental contamination reduces the amount people carry out those activities contributing to a reduction in transfer of Métis knowledge and skills;
- Loss of access to harvesting activities diminishes “pride” and “self-esteem” as harvesters; and,
- Reduced opportunity for FCM members to gather and visit at familiar landmark places. This is linked to increased costs associated with going out on the land to gather and visit, especially at familiar landmark places.

The FCML 125 MLU/EK study indicates that if the proposed Frontier Project is developed, it will directly and indirectly impact access, travel, and opportunity to conduct cultural activities. This will further exacerbate cumulative cultural impacts as a result of industrial development.

Strategies identified by FCM members to support their culture now and into the future (cumulative and project-specific) are also presented. Strategies include:

- Develop or improve the systems and programs that support health and well-being;
- Involve and consult FCM directly in reclamation planning and monitoring for any oil sands projects that proceed with development;
- Develop and implement programs to support knowledge and language retention;
- Develop and implement employment services and job-training programs for youth and other community members;
- Continue to document cultural heritage and development of cultural indicators to monitor, maintain and strengthen FCM cultural integrity into the future; and,
- Conduct additional research into cumulative effects and land-use planning to support a long-term vision to minimize adverse effects and strengthen cultural integrity.

The findings of this report have determined that the cultural components valued by FCM are being negatively affected by the cumulative effects of industrial development. If the

proposed Frontier Project is developed, additional negative effects on FCM culture are expected. The significance of cultural impacts based on criteria put forth by the Canadian Environmental Assessment Agency (CEAA) coupled with the perspectives of FCM members regarding what is significant in their community have a geographical extent that ranges from site specific to regional, a duration that is long-term, is irreversible, and has a social extent that ranges from individuals to all members of society.

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## LIST OF ACRONYMS

ACFN	Athabasca Chipewyan First Nation
ACO	Alberta Consultation Office
CERI	Canadian Energy Research Institute
CEAA	Canadian Environmental Assessment Agency
CEMA	Cumulative Environmental Management Association
CIA	Cultural Impact Assessment
EIA	Environmental Impact Assessment
FCM	Fort Chipewyan Métis
FCML 125 MLU/EK	FCM Local 125 Métis Land Use and Ecological Knowledge Study
GSC	Geological Survey of Canada
HBC	Hudson Bay Company
LSA	Local Study Area
MVEIRB	Mackenzie Valley Environmental Impact Review Board
NWC	North West Company
PAD	Peace-Athabasca Delta
PRM	Pierre River Mine
RFMA	Registered Fur Management Area
RMWB	Regional Municipality of Wood Buffalo
RSA	Regional Study Area
SIR	Supplemental information request
TLUS	Traditional Land Use Study
ToR	Terms of Reference
UNESCO	United Nations Educational, Scientific and Cultural Organization

## GLOSSARY OF TERMS

**Aboriginal rights**—Unique rights that First Nation, Métis and Inuit people of Canada hold by reason of having been independent, self-governing societies prior to the establishment of Canadian sovereignty. These rights are recognized and protected under Section 35 of the Constitution Act, 1982, and are part of the common law in Canada. Aboriginal rights include Métis harvesting rights and the right to site-specific cultural practices and features.

**Alberta Consultation Office (ACO)** – Created under the Government of Alberta’s Policy on Consultation with First Nations on Land and Resource Management, 2013, the ACO office provides consultation management services by coordinating roles and working relationships among the Government of Alberta, the Alberta Energy Regulator, First Nations, and project proponents. Métis are not yet included in this policy.

**Canadian Environmental Assessment Agency (CEAA)** – CEAA is a federal government agency that serves as a centre for federal environmental assessments. The agency is responsible for overall administering of the environmental assessment process and administers the Canadian Environmental Act, 2012.

**Culture** – Defined in this report as “a way of life, a system of knowledge, beliefs, values and behaviours passed down to each generation” (MVEIRB 2009:6)

**Cultural Impact Assessment (CIA)** – A CIA is an informed assessment of potential project-specific development impacts as well as cumulative development impacts on a people’s culture. These changes may occur in a wide range of elements that are considered part of culture. For example, the Mackenzie Valley Environmental Impact Review Board (MVEIRB) identifies the following are aspects of Aboriginal cultures that may be affected by industrial activities: traditional knowledge, commonly held values, oral history, spiritual practices, language, physical heritage resources, traditional dances and songs, place names, spiritual sites and cultural landscapes, traditional land use, and values associated with the land (MVEIRB 2009:6).

**Environmental Impact Assessment (EIA)** – Predictions about the possible positive or negative impacts that a proposed project may have on the environment, which encompasses the biophysical, social, and economic aspects.

**Focus Group** – A focus group is a qualitative research method ideal for seeking reactions, interpreting results, and offering advice (Patton 2001). It consists of a small group of people who share a common experience and are brought together to discuss a particular topic (Bernard 2000; Patton 2001). The focus group in this study brought together selected members of the Fort Chipewyan Métis community to discuss their cultural values and practices and changes associated with industrial development (both perceived and anticipated).

**Métis** –A person who self-identifies as a member of an historic Métis community, who has some form of ancestral connection to that community, and who is accepted as a member by the modern community (Métis Nation of Alberta 2007).

**Peace-Athabasca Delta (PAD)** – One of the largest freshwater river deltas in the world, located in northeastern Alberta, south and west of Lake Athabasca and adjacent to the community of Fort Chipewyan. Much of the delta is contained within Wood Buffalo National Park. The delta is a wetland of international significance, and the park encompassing the delta is a UNESCO World Heritage Site. In Alberta, the delta is considered to be one of the province’s 20 distinct natural sub regions, and in 1982 was designated as a Wetland of International Importance: the Ramsar List (RSIS 1994).

**Regional Municipality of Wood Buffalo (RMWB)** – A municipality located in northeastern Alberta. Its lands include vast deposits of (Athabasca) oil sands (also referred to as tar sands) (see also RMWB 2015).

**Traditional Land Use Study (TLUS)** – Also known as Land Use and Ecological Knowledge Study (LU&EKS), Traditional Use Studies (TUS) and Use and Occupancy Map Surveys (UOM), these studies bring together community knowledge with ethnographic, archival and sometimes archaeological information to provide information about places of cultural, economic, heritage or community use and importance and ideally to provide clarity about the values associated with those places.

# 1. INTRODUCTION

## 1.1. STUDY OVERVIEW

Over recent decades, the ongoing and cumulative uptake of land for bituminous oil sands and related industrial expansion has had a profound and rapid impact on the landscape and lifestyles of northeastern Alberta. Large-scale industrial extraction of bitumen began in the region in 1967 (Hein 2000). Since then, the pace and scale of production from the northern Alberta oil reserves have increased substantially. For instance, bitumen production has increased from around 90,000 barrels per day (bpd) in 1978<sup>1</sup> to approximately 1.9 million bpd today, which is equivalent to nearly 55% of all oil produced in Canada.<sup>2</sup> By 2030, production is projected to increase to 4.8 million bpd.<sup>3</sup> Though in-situ extraction increasingly accounts for a greater proportion of total bitumen produced,<sup>4</sup> the vast majority of production in the region to date has been accomplished through surface mining, which has impacted over 844 km<sup>2</sup> of Alberta's boreal landscape.<sup>5</sup> Recently, Teck Resources Limited's (Teck) Frontier Oil Sands Mine Project (Frontier Project) has been proposed within the northeastern Alberta region. The Frontier Project is being planned to produce an estimated 240,000 barrels per day of bitumen (CEAA 2015).

As large-scale bitumen extraction in northern Alberta has expanded, the cumulative impacts of development to the region's First Nations and Métis peoples and their communities have been significant. For example, changes in the composition of culturally valuable wildlife species have been identified (Alberta Environment 1996; Woven Paths Consulting 2015b). This report focuses on Fort Chipewyan Métis (FCM) and responds in part to FCM repeatedly expressed concerns over broad shifts in the way they live that have occurred as a result of industrial expansion. These shifts include, but are not exclusive to, shifts in harvesting activities due to disturbed lands, migration of animals, and disturbance as a result of noise, odour, and infrastructural development (e.g., visual disturbance) (Woven Paths Consulting 2015b, FCML 125 2010a, FCML 125 2013). These concerns in part inform FCM's strategic five-

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<sup>1</sup> (Alberta Energy 2014): [http://www.energy.gov.ab.ca/About\\_Us/1133.asp](http://www.energy.gov.ab.ca/About_Us/1133.asp)

<sup>2</sup> (Government of Alberta 2014a): [www.oilsands.alberta.ca/resource.html](http://www.oilsands.alberta.ca/resource.html)

<sup>3</sup> Projection made by the Canadian Association of Petroleum Producers (CAPP 2014; <http://www.capp.ca/forecast/Pages/default.aspx>). The Canadian Energy Research Institute (CERI) has made a higher projection of 5.2 million bpd (Alberta Energy 2014: <http://www.energy.alberta.ca/OilSands/791.asp#Production>).

<sup>4</sup> Production from in-situ drilling first exceeded mined production in Alberta in 2012. It did so again in 2013, with 357 million barrels produced from mining and 405 million barrels from in-situ projects, which was equivalent to 53% of total bitumen produced. In-situ projects are expected to comprise 59% of bitumen production in 2023 (CEAA 2014).

<sup>5</sup> (Government of Alberta 2014b): [www.oilsands.alberta.ca/reclamation.html](http://www.oilsands.alberta.ca/reclamation.html)

year plan towards understanding what aspects of culture have changed due to industrial activities that have already taken place and what concerns may arise in the future as industrial development continues. Understanding these aspects are part of FCM's key goal to build a "sustainable prosperous lifestyle" (FCML 125 2010b). In this report culture is used to describe a "way of life, a system of knowledge, beliefs, values and behaviours that are passed across generations" (MVEIRB 2009:6). A people's culture is reproduced

**Culture** is "a way of life, a system of knowledge, beliefs, values and behaviours passed down to each generation" (MVEIRB 2009:6)

from generation to generation through teaching, hands-on experiences, and social engagement, which helps to support cultural continuity. Cultural continuity is considered to be an important factor that contributes to personal and societal resilience and the ability to cope with external stressors (Chandler and Lalonde 2008).

As an integral part of this effort, FCM have partnered with researchers to undertake a Cultural Impact Assessment (CIA). This cultural impact assessment (referred to as the FCM CIA in this report) is designed to complement site-based documentation of use and impact (the primary focus of project-specific TLU studies). The FCM CIA emphasizes the complex cultural meanings and values that the land and land-

**Cultural impact assessment** is an informed assessment of cumulative development impacts, as well as potential project-specific development impacts on a people's culture (MVEIRB 2009:6)

use practices hold for people and the behaviours that support those values. The FCM CIA is intended to demonstrate the ways in which traditional land use activities support aspects of community and culture beyond simply the procurement of resources. This study identifies the ways in which FCM believe their culture is changing or may change as a result of cumulative effects of northeastern Alberta industrial expansion and the proposed Frontier Project.

The process for conducting the CIA followed five general stages outlined in Figure 1. This document is organized according to these stages indicated in Figure 1. Each stage is explained in detail in Section 4.

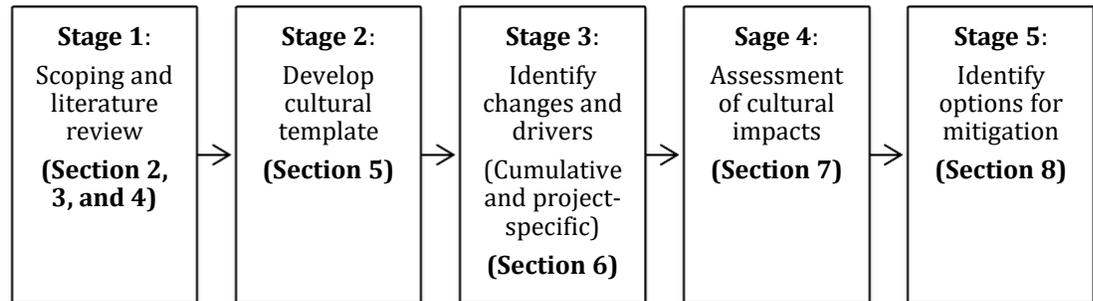


Figure 1 Five general stages of the Fort Chipewyan Métis cultural impact assessment

This study recognizes that there is a complex suite of factors that may impact culture, such as changes resulting from schooling. However, this study strives to consider impacts resulting from *changes to the land and its resources*. This is suitable given the directive of CEAA for Teck Resources to identify the impact of the Frontier Project on FCM’s cultural relationship with the land<sup>6</sup>. As expressed by one FCM member, the land is more than the physical resources, it is connected to their history, sense of belonging, and values,

...I love the land so much. My dad had chosen the land, but I love the land. I live off the land. I know what's out there and what's starting to disappear. I study those things out there. Even the air. Some days the air is clean and some days you smell that garbage from [industrial companies being] pumping into the air. (FCM TLUO Study\_ID12)

The land and its integrity hold a unique and highly valued place in FCM culture and as such the decision to explore culture through FCM’s use and connection to the land is a natural fit. It not only provides a lens to understand the tangible aspects of culture (e.g., use of specific places, transportation routes) but also is a bridge to understanding the less tangible aspects of culture, those that cannot be directly observed (MVEIRB 2009). For example, intangible aspects of culture captured in this study include FCM identity, spiritual beliefs, and traditional knowledge about the land.

To understand how FCM culture is changing, this CIA examines shifts in FCM lifestyles with an emphasis on the land-based activities. Shifts in the ways people live and interact with the land are inextricably linked to the knowledge, languages, values and behaviours tied to the land and associated culture (Adger et al. 2013, Kirsch 2001). This link between shifts in lifestyle (e.g., loss of significant places to conduct cultural activities that play a role in lifestyle) and cultural change are similarly made by the Mackenzie Valley Environmental Impact Review Board (MVEIRB) responsible for conducting EIAs within the Mackenzie

<sup>6</sup> CEAA 2014a, p57. <http://www.ceaa-acee.gc.ca/050/documents/p65505/99188E.pdf>

Valley (MVEIRB 2009). Shifts in lifestyle are used as a reference point to understand how culture has changed or may change as a result of industrial development both current and future. Cultural impact involves changes to a way of life, the beliefs, values, and behaviours of individuals that guide and rationalize their understanding of themselves and their society (Burdge and Vanclay 1996:59). In the context of FCM, the land and the resources and activities that it supports remain highly important to FCM. Concerns about lifestyle changes associated with the changes to the land and its resources (e.g., changes in opportunity to harvest animals) caused by industrial expansion (e.g., wildlife decline due to changes in air, water, and/or land quality) are important indicators of impacts to FCM culture.<sup>7</sup>

To assess cumulative impacts and potential project-specific impacts of the Frontier Project, this CIA was conducted concurrently and in close association with the *FCM Local 125 Métis Land Use and Ecological Knowledge Study* (FCML 125 MLU/EK Study). This study, being led by Woven Paths Consulting, is assessing community traditional land use, occupancy, and site-specific knowledge related to the proposed Frontier Project. Teck has provided support for both studies due in part to requirements identified in the following documents (see also Section 3.1):

- ESRD Terms of Reference (ToR) for the Frontier Project, February 11, 2009<sup>8</sup>;
- Frontier Project Federal SIR #3 2.3/Provincial SIR #2 138<sup>9</sup>; and,
- Draft ToR for the Joint Review Panel<sup>10</sup>.

The two studies are complementary. Both studies discuss impacts to people and the land as a result of industrial development. The key difference between the two studies is the prominence placed on cultural elements by the CIA, as opposed to the stress placed on geographic or spatial documentation by the MLU/EK. For example, the FCML125 MLU/EK study documented site-specific traditional land use activities such as hunting, fishing and gathering, as well as cabin building, burial, and trail locations. The CIA broadens our understanding of cultural impacts (cumulative and project-specific) by including intangible aspects of culture that are not otherwise captured within the FCML125 MLU/EK study (e.g., FCM identity, spiritual beliefs, and traditional knowledge about the land).

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<sup>7</sup> The Government of Alberta has applied constitutionally protected harvesting rights to demonstrated Métis harvesters (Government of Alberta 2010: [www.esrd.alberta.ca/fish-wildlife/fishing-hunting-trapping/documents/MetisHarvestingAlberta-Jun2010.pdf](http://www.esrd.alberta.ca/fish-wildlife/fishing-hunting-trapping/documents/MetisHarvestingAlberta-Jun2010.pdf))

<sup>8</sup> (Alberta Environment 2009): <http://esrd.alberta.ca/lands-forests/land-industrial/programs-and-services/environmental-assessment/current-projects.aspx> (pg 23)

<sup>9</sup> (CEAA 2013): (<http://www.ceaa-acee.gc.ca/050/documents/p65505/99188E.pdf> (pg 57-58)

<sup>10</sup> (CEAA 2009): <http://www.ceaa-acee.gc.ca/050/documents/p65505/98501E.pdf>

The CIA drew Frontier Project-specific information from the FCML 125 MLU/EK study to assess potential cultural impacts (tangible and intangible) that may arise if the proposed project is implemented. For example, information gained from the FCML 125 MLU/EK study regarding the number of preferred hunting areas that will be directly impacted by the Frontier Project was helpful in the CIA for assessing the potential cultural impacts related not only to hunting (observable lifestyle, a tangible aspect of culture), but also less tangible aspects of culture, such as impacts on traditional knowledge about the land.

Together, the FCML 125 MLU/EK and FCM CIA studies outline community supported mitigation measures to lessen potential adverse impacts to FCM culture. Further, these studies have implications for consultation and accommodations on current and future industrial projects with potential to impact FCM. While the Government of Alberta does not require formal consultation with Métis, the Métis Nation of Alberta has been engaged in negotiations with government officials to have Métis included in the provincial consultation policy. In the meantime, innovative companies are engaging in such consultations whether or not they are required to do so.

## 1.2. STUDY SCOPE

The FCM CIA has both geographic and temporal components.

Geographically, the study ranges in scale from the development footprint of the Frontier Project (equivalent to the Local Study Area, or LSA, in the FCML 125 MLU/EK Study) to the wider regional landscape of the land surrounding the settlement of Fort Chipewyan (equivalent to the Regional Study Area, or RSA, in the FCML 125 MLU/EK Study). With this range, we address the potential impacts to FCM culture resulting both from the Frontier Project and from the legacy of cumulative development at the regional level with an emphasis on the region downstream of Frontier Project and other industrial development. Culture is *not* solely a geographic construct. Where possible, locations of cultural impact were linked to locations on the land identified in the FCML 125/EK Study. Together the two studies better represent impacts to land use and impacts to culture.

These boundaries are delineated as:

**LSA:** The LSA for the FCM CIA equals the Project footprint (the LSA for the FCML 125/EK Study) plus a 10 km buffer. According to the FCML 125/EK Study report, this area was chosen as a moderate buffer based on setback distances required to limit noise, odours and visual disturbance. The LSA is 1683.43 km<sup>2</sup> in size (Woven Paths Consulting 2015b). See Section 2.2, Figure 2 for a map of the LSA region.

**RSA:** The RSA for the FCM CIA equals the RSA for the FCML 125/EK Study. It is 13,837.16

km<sup>2</sup> in size (Woven Paths Consulting 2015b). The RSA focuses on the Peace Athabasca Delta (PAD) and includes Métis traplines on Lake Athabasca and the Athabasca River. The RSA also includes watersheds for the Buckton Creek and McIvor Rivers that flow north from the Frontier into Lake Claire, in Wood Buffalo National Park. See Section 2.2, Figure 2 for a map of the RSA region.

Temporally, this study involves a comparison of how aspects of culture and land use were expressed in the past, in relation to a pre-industrial baseline, and how they are expressed today, as well as making predictions about how they may change in the future. We have adopted 1960 as the approximate baseline marking the end of a pre-oil sands way of life in Fort Chipewyan following validation and confirmation from FCM CIA study participants that this time period reflected the onset of dramatic change for FCM.<sup>11</sup> It is important to note, however, that industrial activity beginning in the 1960s is not the only driver of change the community has experienced. As will be described under Setting (Section 2.2), the community of Fort Chipewyan has been undergoing significant change since the end of World War I, due to federal and provincial policies to facilitate the settlement and industrialization of the north and especially due to regulations imposed on access to and control over the land and its resources (e.g., the creation of Wood Buffalo National Park in 1922 and 1926 and the establishment of the registered trapline systems in the early 1940s).

### 1.3. RESEARCH QUESTIONS AND STUDY GOALS

Using the pre-development baseline described in Section 1.2, this research is guided by the following goals:

1. Identify key aspects of FCM lifestyle that are valued in FCM members and develop indicators for cultural assessment;
2. Identify key changes in lifestyle (and drivers for this change) that arise from cumulative development and may arise from the proposed Frontier Project development;

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<sup>11</sup> The 1960s is generally considered the temporal baseline for the beginning of oil sands development in northeastern Alberta, as it is the decade when the first major oil sands mine was developed, in 1967, by the Great Canadian Oil Sands Ltd., now known as Suncor (Hein 2000). The year 1968 was also the year that the WAC Bennett Hydropower Dam started to impound water and generate electricity. The dam was built across the Peace River in northeastern British Columbia, resulting in altered and often restricted flow to the PAD, which has changed the hydrological regime and water levels and significantly modified patterns of traditional land use across the delta. The people of Fort Chipewyan were not consulted during the planning or construction stages of the project and never received compensation for any of the losses they incurred.

3. Conduct an assessment of cultural impacts that considers past, current and future changes in culture; and,
4. Identify what FCM believe is required to support their culture in light of continued development.

Study results are intended to assist FCM in discussions, consultations and negotiations with government and industry operating in lands identified by FCM members as important by providing their roadmap or vision of what they believe is necessary to maintain FCM cultural integrity. These considerations are especially important considering that the Province of Alberta does not yet mandate a consultation process for Métis (AAR 2013).

## 2. CIA SETTING

### 2.1. FORT CHIPEWYAN MÉTIS ENVIRONMENT AND HISTORY

Lake Athabasca and the Peace-Athabasca Delta comprise a region of immense resource concentration that ranks among the most biologically productive areas in the world. The lake spans northeast Alberta and northwest Saskatchewan and has an area of approximately 7,770 km<sup>2</sup>, making it the eighth largest lake in Canada (Prepas and Mitchell 1990). At the west and southwest end of the lake, the Peace and Athabasca Rivers empty into the PAD, which is one of the largest inland freshwater deltas in the world.<sup>12</sup> The PAD consists of numerous water bodies the Peace, Slave and Athabasca river systems through an abundance of active and inactive channels. It is approximately 321,200 ha in area and is characterized by 11 major habitat types, supporting more than 215 species of birds, 44 species of mammals, 18 species of fish, and thousands of species of insects and invertebrates.<sup>13</sup> The delta is one of the most important waterfowl nesting and staging areas in North America, and it supports large herds of buffalo on the sum of the largest undisturbed grass and sedge meadows on the continent. It is these resources that historically supported the fur trade and local Aboriginal populations and that continue to help support the FCM community. Flow of the delta is generally northward toward the Slave River, but historically waters from the Peace River regularly reversed during spring or summer flooding, leading to flooding of the delta. These occasional floods served to replenish the delta habitats (Beltaos et al. 2006). This essential hydrological regime was altered by the Bennett Dam, whose harmful impacts have never been effectively mitigated. Because of its size and ecological value, the PAD has been

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<sup>12</sup> (Environment Canada 2013): <https://www.ec.gc.ca/inre-nwri/default.asp?lang=En&n=832CDC7B&xsl=articlesservices,viewfull&po=357EBE1F>

<sup>13</sup> (RSIS 2001): <https://rsis.ramsar.org/RISapp/files/RISrep/CA241RIS.pdf>

designated a wetland of international importance under the Ramsar Convention.<sup>14</sup> Wood Buffalo National Park, which contains the largest portion of the PAD, is also a UNESCO World Heritage Site, although in 2014 Mikisew Cree First Nation launched a challenge to UNESCO, claiming that the park should be added to the list of world heritage sites in danger, due to industrial expansion to the south and the possibility of additional dams on the Peace River.

Historically, the vast resource wealth within the Lake Athabasca and PAD region supported the populations of a number of different cultural groups over many generations and contributed to the region's attraction to European fur traders (Parker, J. 1972). On the eve of the arrival of European traders, there was a complex and evolving Aboriginal profile in the lands of the Lake Athabasca region, with at least three different Aboriginal groups present. They included (i) the Beaver, a Dene group occupying the Peace River and other lands west of Lake Athabasca, (ii) the Chipewyans, a different Dene group occupying lands to the north and east of the lake, and (iii) Cree populations occupying areas both south and north of the lake, including the Slave River and the southeast side of Great Slave Lake (McCormack 2010:20-21). European trade with people from these groups began sometime between the late seventeenth and early eighteenth centuries from fur trade posts located on the west coast of Hudson's Bay. The trade in the Athabasca country was initially indirect and conducted mainly through Aboriginal "middlemen" who either traded furs for goods through eastward neighbors or traveled east via land and river to trade directly at the French or English forts on Hudson Bay (Fort Bourbon and York Factory and Fort Churchill, respectively) (McCormack 2010:18). The voyage east was long and hazardous, with often hostile interactions among the Cree, Chipewyan, and Inuit groups trading with the forts (Smith 1981, Reedy-Maschner and Maschner 1999), but it was through these efforts that Aboriginal groups in the remote Northwest interior obtained goods of the fur trade long before European traders had actually entered the region (Siegfried et al. 2005).

At Lake Athabasca direct trade began when Peter Pond and his party arrived in the region in 1778 and established an independent trading post near the northern end of the Athabasca River, at its junction with the Embarras River (Parker 1987:6; McCormack 2010:18). In the years that followed, a steady increase of European traders and their employees arrived in the area, representing numerous companies and a complex series of business consortiums. The rapid growth in trade in the Northwest was briefly disrupted due to the smallpox epidemic of 1781-1783 (Decker 1988). This epidemic significantly reduced both Chipewyan and Cree populations and may have contributed to Crees withdrawing from the north. While

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<sup>14</sup>(RSIS 1994): [http://archive.ramsar.org/cda/en/ramsar-documents-texts-convention-on/main/ramsar/1-31-38%5E20671\\_4000\\_0\\_\\_](http://archive.ramsar.org/cda/en/ramsar-documents-texts-convention-on/main/ramsar/1-31-38%5E20671_4000_0__)

smallpox apparently reached into the English River region at this time, it is not clear that it reached Lake Athabasca (McCormack 2010:70-71).

## 2.2. TECK FRONTIER MINE PROJECT

The Teck Frontier Project is a proposed truck-and-shovel oil sands surface mine to be located on the west side of the Athabasca River in the Athabasca oil sands region of northeastern Alberta (Figure 1-1). The Frontier Project location is approximately 109 kilometers southwest of Fort Chipewyan, and about 110 kilometers north of Fort McMurray. The Project is approximately 20 kilometers to the northwest of the Suncor Fort Hills Project, and it is bordered to the south and east by the proposed Shell Canada Ltd. Pierre River Mine (PRM) project, currently on hold<sup>15</sup>.

The Frontier Project has been designed to achieve an estimated production capacity of 240,000 barrels per day of bitumen,<sup>16</sup> and it will have a total disturbance of 29,217 hectares.<sup>17</sup> The Frontier Project footprint will consist of two open pits, an ore preparation plant, a bitumen processing plant, tailings and cogeneration facilities, overburden and waste disposal areas, reclamation material storage areas, river water intake, an off-stream water storage pond and a fish habitat compensation lake, lodging facilities and an aerodrome, and energy corridors and roads (Teck 2011). The Frontier Project will include diverting waterways that are used by FCM. It will also require a new bridge across the Athabasca River, which will open up access to back country that has otherwise been relatively inaccessible. If approved, initiation of Phase 1 will occur in 2021. First oil is scheduled to occur for the end of 2025, with production continuing until 2066.<sup>18</sup>

FCM has expressed the following key concerns with the proposed Teck Frontier Project (Woven Paths Consulting 2015b),

- Disturbance of animal habitat and impedance of trapping and hunting activities through deforestation and habitat fragmentation
- Disruption of access routes to land
- Uncertainty in success of reclamation of vegetation and wildlife after project closes
- Water withdrawals

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<sup>15</sup> In February 2015 Shell Canada withdrew its regulatory application for the Proposed Pierre River Mine project. Shell continues to hold the leases and rights to reapply.

<sup>16</sup> (CEAA 2015): <http://www.ceaa-acee.gc.ca/050/details-eng.cfm?evaluation=65505>

<sup>17</sup> (Teck 2014): <http://www.ceaa-acee.gc.ca/050/documents/p65505/100369E.pdf>

<sup>18</sup> (Teck 2014): <http://www.ceaa-acee.gc.ca/050/documents/p65505/100369E.pdf>

- Uncertainty surrounding a proposed bridge on water channel and fish over the Athabasca River
- Increased access to hunting areas creating more competition for resources, increased trash and potential theft and vandalism of property
- Hiring practices favour outside and skilled workers despite the potential benefit of local knowledge for the project
- Water quality and quantity
- Contamination of air effecting the quality of wildlife and plant resources
- Reduced biodiversity
- Disturbances from lights, odours, noise, visual effects from project-related activities
- Destruction of specific places with historical, spiritual, and cultural significance
- Reduction in opportunities to share knowledge across generations

## Fort Chipewyan Métis Land Use & Ecological Knowledge Study 2014

**Figure 10:  
Government of Alberta  
Métis Harvesting Area**

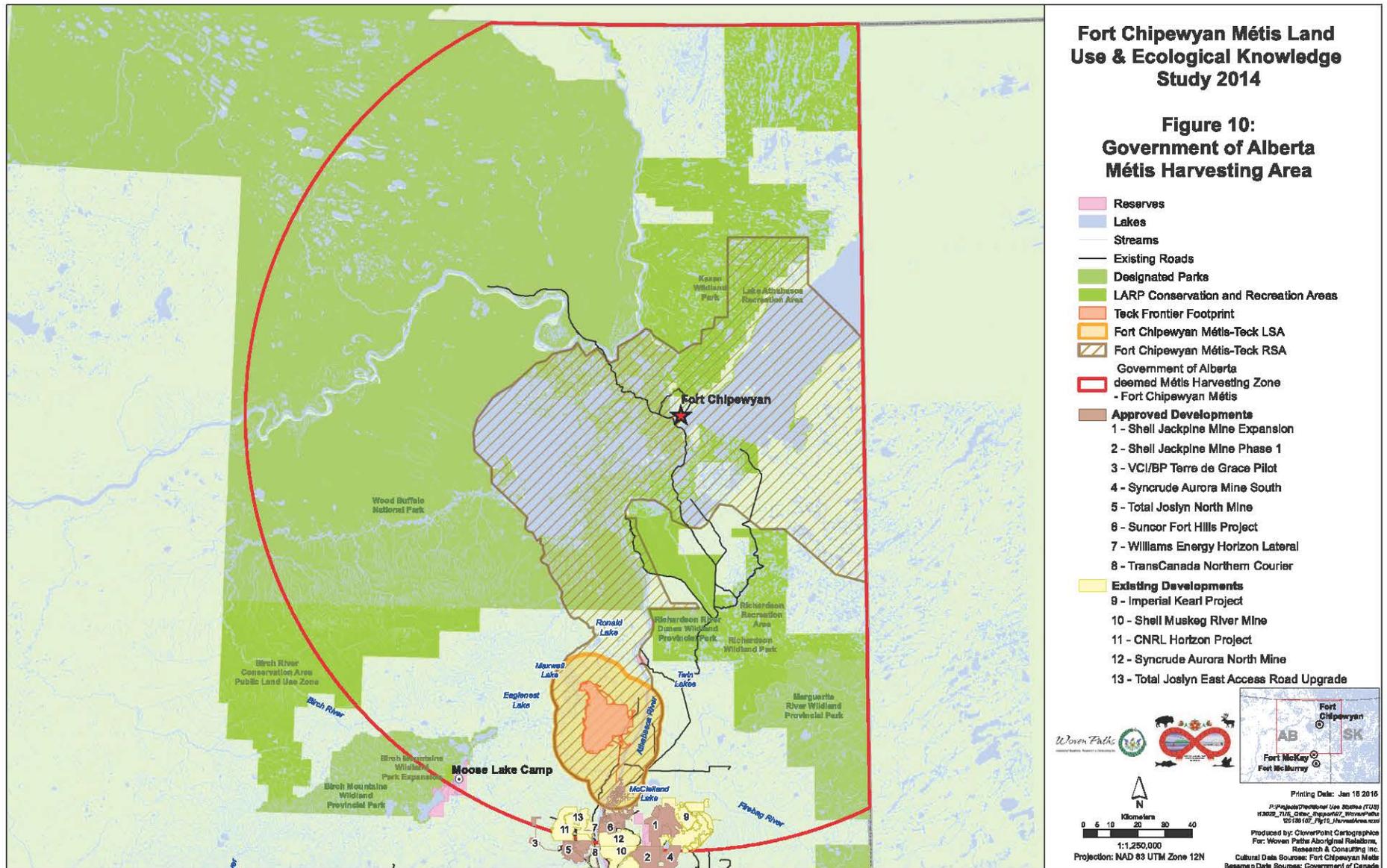


Figure 2 The Fort Chipewyan Métis harvesting area in northeastern Alberta, as delineated by the Government of Alberta. Also displayed are the footprints of the proposed Teck Frontier Project and other approved and existing projects in the region. Figure adapted from the FCML 125 MLU/EK study.

### 2.3. FORT CHIPEWYAN

Fort Chipewyan was founded in 1788 as a more strategic location to intercept Chipewyans in trade and also as a staging location for Alexander Mackenzie's exploration of the (later named) Mackenzie River (Parker 1987:10-11). This first Fort Chipewyan was located on the southwest shore of Lake Athabasca at a place now known as Old Fort Point, now one of the Chipewyan reserves (Innis 1999, Siegfried et al. 2005).<sup>19</sup> In the following years, Fort Chipewyan was the main point of contact for the trade in the Lake Athabasca region, and the NWC maintained this dominance until the XY Company and Hudson's Bay Company (HBC) established nearby trading posts in 1800 and 1802, respectively. Competition between the companies was fierce and culminated with the amalgamation of the HBC and NWC in 1821. The HBC then held a monopoly on fur trading in the region until 1870, after which it sold its holdings to Great Britain for transfer to the new Dominion of Canada (McCormack 2010:50-51). Fort Chipewyan was now technically part of the new Dominion of Canada, as part of the North-Western Territory, but in name only. Canada would not enjoy political or economic power over the Fort Chipewyan region until the 20<sup>th</sup> century.

Culturally, the community that came together to conduct the trade of Fort Chipewyan represented a diverse mixture of European and Aboriginal ancestries and languages, including English, Scots, Orcadians, Welsh, Irish, French, French Canadian, American, Métis and other mixed-ancestry workers, as well as Iroquois (McCormack 2010:21-22). Employees of the NWC were mainly Scots, French Canadians, and people of mixed-ancestry (though not necessarily "Métis" as the term is understood today), whereas the HBC labour force was primarily Orcadian, Scots, and English. By the mid-nineteenth century, Anglican and Roman Catholic missionaries had joined the growing community. The Anglican missionaries were mostly Englishmen, whereas the Roman Catholic missionaries were priests from France, Belgium, or Quebec. Meanwhile, the Aboriginal communities of the region also underwent change as they adapted to the new local system of trade. By the 1790s, many Chipewyan people were moving south from their northern ranges and established themselves as the dominant Aboriginal population of the Fort Chipewyan region until the mid-twentieth century. Crees also maintained a strong presence in the area. The original occupants of the region, the Beaver, had retreated westward by the early nineteenth century due to the incoming populations of Cree and Chipewyan (Yerbury 1976, McCormack 2010:20-21).

With the end of the HBC monopoly in 1870, the economic trajectory of Fort Chipewyan

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<sup>19</sup> This fort was actually the first of four different forts of the same name in the area around the west end of Lake Athabasca. The various relocations were based on optimizing trade relationships with the Crees and Chipewyans, but relocations were also in some cases related to the dilapidated state of previous post and the need for renovations (Innis 1999, Siegfried et al. 2005).

began to shift, and new phase of fur trade competition began. By this time, access from (Fort) Edmonton to the north had been improved, and free traders began to arrive in the Fort Chipewyan area, driving up prices and fur production and contributing to instability of fur-bearer populations (McCormack 2010: chp. 5; McCormack 1984). Adding to this shift was the introduction of steamboats in the 1880s, which reduced labor requirements for transport and led to increased fur production as discharged employees turned to trapping (McCormack 2010:75-78). By the end of the nineteenth century, Fort Chipewyan had grown into a small town and had become an important crossroads for people accessing the north. Miners began passing through in 1897, attracted by the Klondike gold rush, and the North-West Mounted Police (NWMP) established a presence in the town in 1898. There was also a steady stream of geologists and surveyors visiting the area on behalf of the Geological Survey of Canada (GSC) and the Dominion Lands Survey (DLS), reflecting the government's growing interest in resource potential in the region, and perhaps foreshadowing their determination eventually to negotiate a treaty for the district (McCormack 2010:chp. 5; Siegfried et al. 2005). Treaty 8 was signed by Fort Chipewyan and Cree leaders in 1899, and then Métis people could apply to the Half-breed Commission for money or land scrip (McCormack 2010:chp. 8).

The turn of the century brought a new set of changes and challenges to Fort Chipewyan as Canada and the new province of Alberta (1905) introduced new regulatory regimes to govern access to land and resources and facilitate settlement and industry in the north. Especially important were the first railways from Edmonton to the north<sup>20</sup> (McCormack 2010:chps. 9, 10). A parallel set of developments was sponsored by private industry, especially the improvement of northern transportation systems. Though motions to initiate these actions began early in the century, the local Aboriginal population enjoyed considerable prosperity until the end of World War I, when they faced a series of epidemics and the invasion of White trappers who stripped the land of its fur resources (McCormack 2010:268-271, 274; McCormack 1984:chp. 4).<sup>21</sup> There were increased restrictions on access to the land due to the creation of Wood Buffalo National Park in 1922 and 1926 and the establishment of the registered trapline systems in the early 1940s (McCormack 1984:chps. 4, 5; Siegfried et al. 2005). These years mark the beginning of the community's decline from its former sense of local autonomy and self-sufficiency and the creation of Aboriginal poverty. The fur trade and traditional economy of the region began to erode, and over time the local Aboriginal

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<sup>20</sup> A provincial example is the Alberta Game Act of 1907, which temporarily required hunting and trapping licenses of all citizens; Treaty 8 Indians were exempted from the Act in 1919. Federal examples include regulatory systems that were imposed for wildlife protection and fire prevention (McCormack 2010).

<sup>21</sup> Epidemics that impacted the Fort Chipewyan community included a smallpox epidemic in 1921 and a devastating influenza epidemic in 1922 (McCormack 2010).

people would find it increasingly difficult to subsist on traditional land uses alone.

Support for northern industries intensified after World War II, when the community of Fort Chipewyan saw an increase in government and private investment in the fish, lumber, and bison resource sectors (McCormack 1984:chp. 7). However, for the most part, these new enterprises did not meet the economic needs of local Aboriginal people in an adequate way. At the same time, a decline in the fur trade, post-war inflation, and a diminished bush resource base (due to three decades of poor management by federal and provincial officials ), made it difficult for Aboriginal people to be able to continue to support themselves by means of their traditional bush-based economies. Most Aboriginal people who had lived in the bush and in bush settlements eventually relocated to Fort Chipewyan during the 1950s and 60s and in later years (McCormack 1984:chp. 8). They continued to harvest bush resources but also sought employment in the new industries, which used a mixture of local and imported labour (McCormack 1984:chp. 7; Siegfried et al. 2005). Regular adequate employment was episodic and insufficient to support all residents, and a variety of social transfers became important parts of personal and family economies. By the 1960s, the local Aboriginal livelihood was typically a mixture of bush subsistence activity (hunting, fishing, trapping, gathering), sale of commodities produced from the resources of the bush (furs, fish, and handicrafts), wage labor, and government transfers. The 1960 oil sands baseline reflects this half-century of transformation of activities.

## 2.4. MÉTIS

Métis are Aboriginal Peoples in Canada that descend from First Nations and European settlers. Their distinct Aboriginal status was confirmed in the Constitution Act, 1982. The earliest Métis can be traced back to the 17<sup>th</sup> century fur trade in the Great Lakes region and then to 18<sup>th</sup> century developments in the western fur trade, especially in the Red River region of southern Manitoba. In the south, Métis typically developed from unions between Cree, Ojibwa and Saukteaux women and European men from Britain and New France, with other origins, both Aboriginal and European, adding to the mix at later times (MNA 2007). In the north, European men married Dene women and developed distinctive Métis societies separately from those in the south (McCormack 2010:22-23).

Marriages between European traders and Aboriginal women, often called “country marriages,” provided a vehicle for social and economic relationships between members of these different groups (McCormack 2010:36). Not all children of such marriages became Métis, which required distinctive circumstances leading to cultural differences from the cultures of their Aboriginal and European parents. Those who did become identified as Métis played important roles in the western fur trade. In the north, they were particularly important as workers for the fur trade. They served as hunters, fishermen, and trappers,

producing food for themselves as well as for the post. They worked in transport and a variety of other tasks associated with life at a post such as Fort Chipewyan. For example, men cut firewood, build and repaired buildings and boats, and visited the Chipewyan and Cree settlements to buy furs in the winter, while women tanned hides, made clothing, webbed snowshoes, prepared food, and did most of the child rearing. Both men and women might serve as interpreters. Their kinship ties allowed them to bridge cultural gaps and foster trade relationships.

The Métis of Fort Chipewyan have three origins, two of which are northern and one, southern. The northern groups originate from French and French-Métis and from Scots and Orcadians; both groups developed independently in Fort Chipewyan, although they had some links to other communities. They were not necessarily strongly distinguished in either culture or identity from Chipewyans and Crees until after the signing of Treaty 8 and the issuance of Half-breed scrip in 1899, which created legal distinctions between First Nations (“treaty Indians”) and “Half-breeds,” now typically called Métis. These Métis were closely associated with the fur trade and missionaries at Fort Chipewyan. The southern group originates from Métis of the parkland who moved to the Fort Chipewyan region after World War II, settling in communities in the bush that were similar to the winter settlements of First Nations. This group brought their Parkland Métis traditions with them, which included a distinctive Michif language. Both groups shared a rich culture of fiddle music and dancing (jigs and square dances). Fort Chipewyan Métis continue to hunt, trap, fish and gather berries and other plants in ways that parallel those of the Chipewyans and Crees who live there.

### 3. REQUEST FOR THE FCM CIA

#### 3.1. TECK FRONTIER CIA

Below are select segments and quotations from key documents that have led to the establishment and execution of a CIA related to the Teck (Frontier) Project. Note that emphasis in quotations below has been added.

**ESRD Final Terms of Reference for the Frontier Project (February 11, 2009):<sup>22</sup>**

##### 5. TRADITIONAL ECOLOGICAL KNOWLEDGE AND LAND USE

[A] Provide:

d) a discussion of:

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<sup>22</sup> (ESRD 2009): <http://esrd.alberta.ca/lands-forests/land-industrial/programs-and-services/environmental-assessment/current-projects.aspx>

iv) ongoing impacts to traditional lands and culture;

f) a discussion of traditional uses including fishing, hunting, trapping, nutritional or medicinal plant harvesting, and cultural use by affected aboriginal peoples

**Draft Agreement to Establish a Joint Review Panel for the Frontier Oil Sands Mine Project Between the Minister of the Environment, Canada and the Alberta Energy Regulator, Alberta (March 17, 2014) :<sup>23</sup>**

The Joint Review Panel shall consider:

- Evidence presented by participants concerning any potential project effects to asserted or established Aboriginal or treaty rights, such as:
  - Any potential effects on current uses of lands and resources by Aboriginal persons for traditional purposes;
  - Any effects (including the effects related to increased access and fragmentation of habitat) on hunting, fishing, trapping, cultural and other traditional uses of the land (e.g. collection of medicinal plants, use of sacred sites), as well as related effects on lifestyle, culture, health and quality of life of Aboriginal persons;
  - Any effects of alterations to access into areas used by Aboriginal persons for traditional uses;
  - Any adverse effects of the project on the ability of future generations to pursue traditional activities or lifestyle;
  - Any effects of the project on heritage and archaeological resources in the project area that are of importance or concern to Aboriginal groups;
  - Evidence presented by participants concerning the measures proposed to manage, mitigate and compensate any identified effects on asserted or established Aboriginal rights and interests.

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<sup>23</sup> (CEAA. 2014 pA2): <http://www.ceaa-acee.gc.ca/050/documents/p65505/98501E.pdf>

### Supplemental Information Request No. 3 provided to Teck Resources Ltd by the Alberta Energy Regulator on May 14, 2014<sup>24</sup>

The SIR was requested on May 14, 2014 and required for the AER, ESRD and CEAA to continue their review of the Frontier Project application. The requests related to culture listed below are notable. In addition to project Terms of Reference developed by the Province of Alberta, the federal Canadian Environmental Assessment Agency has indicated it is a requirement for the hearing to address cultural and spiritual relationships with the land. In the words of the SIR;

Teck's response does not address the intergenerational impact of the Project on the cultural and spiritual relationship with the land, for example, the transmission of site specific knowledge and practices (sic). Based on consultation and traditional knowledge from all potentially impacted Aboriginal groups:

- g. Provide an assessment of cultural and spiritual impacts of the Project for each potentially impacted Aboriginal group, including Métis. (p57)

Further, Teck states that it has reached an agreement regarding compensation for the loss of Registered Fur Management Area (RFMA or trapline) (see p.1275). However, commercial rights to a RFMA are not the same as the collectively held Aboriginal rights.

- i) Describe how Teck will compensate for the loss of opportunity to exercise Aboriginal rights associated with the use of the areas with affected traplines. (p58)

## 4. CULTURAL IMPACT ASSESSMENT METHODOLOGY

A central component of a cultural impact assessment involves gaining an understanding of culture and the activities carried out that embody and support that culture from the perspectives of local community members. This research is positioned in a constructivist research paradigm where the researcher and participant co-construct understandings about the phenomena of interest (Ponterotto, 2005). The goal is to understand the "lived experience" from the perspective of those that live it. To understand the culture of the FCM and the activities that support it, this study relied on shifts in lifestyle experienced by FCM as a result of industrial development to understand and assess cultural impacts. Therefore, this CIA examined shifts in lifestyle connected to land-based activities and drew linkages to their impacts on culture (e.g., values, beliefs, behaviours that are shared across generations). Care

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<sup>24</sup> (CEAA 2014b, p57) <http://www.ceaa-acee.gc.ca/050/documents/p65505/99188E.pdf>

was taken to examine shifts in lifestyle connected to land –based activities that are linked to industrial development (cumulative) and specific to the Frontier Project.

This CIA was developed in five stages:

Stage 1: Identify project goals and objectives.

Stage 2: Identify FCM cultural components and develop indicators for cultural assessment.

Stage 3: Identify key changes in lifestyle and identify the key drivers for this change.

Stage 4: Determine significance of impacts.

Stage 5: Identify factors to support FCM culture.

Without clear methodological guidelines for conducting a CIA from CEAA, the design of these five stages were adapted from the MVEIRB CIA Guidelines and align with the broad steps for conducting an environmental impact assessments put forth by the Canadian Environmental Assessment Agency. Figure 3 illustrates these five stages and their linkage with the FCML 125 MLU/EK Study and data collection methods. The following sections of this report are organized according to Stages 2-5 of the study.

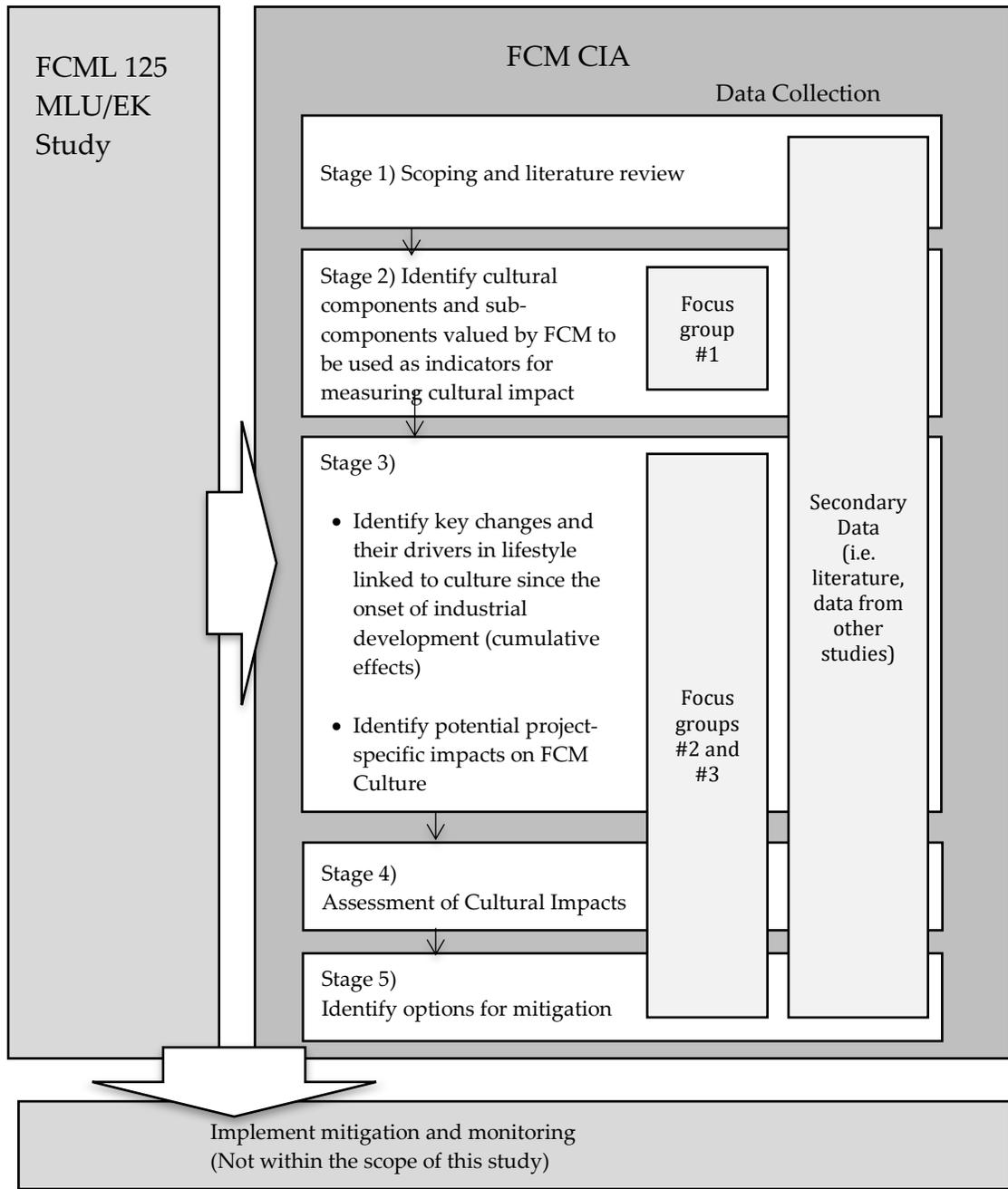


Figure 3 Five stages of the CIA and their linkage with the FCML 125 MLU/EK Study and data collection methods

### Stage 1: Identify project goals and objectives

Stage one comprises the scoping portion of the study. During this stage, project goals and objectives were identified in partnership with FCM. Researchers and FCM communicated through telephone meetings and email to discuss and develop the goals of the research and community engagement, to undertake detailed discussion about the purpose of the study and to plan the logistics for study implementation (e.g., resources, timing). A literature review was conducted in this stage of the study.

### Stage 2: Identify FCM cultural components and develop indicators for cultural assessment

Stage two of the study identified cultural components valued by FCM members through a series of discussions with select members of the FCM community. These discussions explored aspects of lifestyle with an emphasis on the land, especially, what knowledge, activities and behaviours connected to the land are valued by FCM. This approach also relates directly to request for information in the CEAA Supplemental Information Request No. 3 (CEAA 2014b). Through an examination and analysis of lifestyle information articulated by FCM members, cultural components valued by FCM were identified and used to develop a Cultural Template (See Section 5 for how the Cultural Template was developed). The Cultural Template served as a foundation to assess significance of various aspects of culture to FCM. The Cultural Template was used to develop qualitative indicators with measurable parameters. Qualitative indicators with corresponding measurable parameters are helpful because they provide a means to assess cultural impacts that may not be easily identified quantitatively (i.e., changes in values, beliefs). A summary of the cultural components valued by FCM, key indicators, and measurable parameters are displayed in Table 2. The details about the community discussions that informed the cultural components, key indicators and measurable parameters are described in Section 5.

*Table 2 Valued cultural components, valued cultural sub-components, key indicators and corresponding measurable parameters*

Valued Cultural Component	Valued cultural sub-component	Key indicator	Qualitative measurable parameters
Wellbeing	Spiritual practice	Opportunities to engage in spiritual practice	<ul style="list-style-type: none"><li>• Access to places and locations preferable for spiritual practice</li><li>• Sensory disturbance affecting spiritual practice</li></ul>

	Being on the land	Opportunities to be on the land	<ul style="list-style-type: none"> <li>• Changes to travel routes that effect being on the land</li> <li>• Disturbance to preferred areas to be on the land</li> <li>• Reduced access to land based activities</li> </ul>
		Opportunities to travel on the land	
	Métis Identity	Strong sense of identity	<ul style="list-style-type: none"> <li>• Cross generational changes in identity</li> <li>• Sense of loss or negative change in identity</li> </ul>
Knowledge & Language	Stories and History	Opportunities to share stories	<ul style="list-style-type: none"> <li>• Reduction in places preferred to share and teach</li> <li>• Reduction in opportunities to speak traditional languages, practice/teach/learn traditional activities</li> </ul>
	Teaching and Sharing	Opportunities to learn and teach traditional aspects of Métis life	
Providing	Fishing	Opportunities to harvest fish	<ul style="list-style-type: none"> <li>• Disturbance of fish harvesting areas</li> <li>• Changes in the quality and quantity of fish</li> <li>• Sensory disturbances effecting aboriginal and animal users</li> <li>• Changes in access to harvesting areas</li> </ul>
	Hunting	Opportunities to hunt	<ul style="list-style-type: none"> <li>• Disturbance of harvesting areas</li> <li>• Changes in the quality and quantity of animals</li> <li>• Sensory disturbances effecting aboriginal and animal users</li> <li>• Changes in access to harvesting areas</li> </ul>
	Trapping	Opportunities to trap	<ul style="list-style-type: none"> <li>• Disturbance of harvesting areas</li> <li>• Changes in the quality and quantity of animals</li> <li>• Sensory disturbances effecting aboriginal and animal users</li> <li>• Changes in access to harvesting areas</li> </ul>

	Plant Harvesting	Opportunities to harvest plants	<ul style="list-style-type: none"> <li>• Disturbance of plant harvesting areas</li> <li>• Changes in the quality and quantity of plants</li> <li>• Sensory disturbances effecting aboriginal and animal users</li> <li>• Changes in access to harvesting areas</li> </ul>
	Water	Availability of water quality and quantity for travel, and to sustain plants and animals	<ul style="list-style-type: none"> <li>• Changes in the quantity and quality of water</li> </ul>
	Gardening	Opportunities to garden	<ul style="list-style-type: none"> <li>• Disturbance to preferred gardening areas</li> </ul>
Gathering, Visiting and Sharing	Sharing	Opportunities to share	<ul style="list-style-type: none"> <li>• Disturbance of preferred places to share, gather and visit</li> </ul>
	Gathering and Visiting	Opportunities to gather and visit	<ul style="list-style-type: none"> <li>• Access to preferred places to share, gather and visit</li> <li>• Factors that limit ability to share, gather and visit</li> </ul>

Each indicator used in this study was linked with associated site-specific TLU values highlighted in the FCML 125 MLU/EK study. This linkage is particularly helpful for considering potential impacts from the proposed Frontier Project. For example, the FCML 125 MLU/EK study highlight specific places, routes, and habitation sites that will directly or indirectly be changed by the Frontier Project. These changes have implications for both tangible (e.g. transportation routes) and intangible aspects of culture (e.g., spiritual beliefs). The TU Values which we used from the FCML 125 MLU/EK study included<sup>25</sup>:

- Critical Wildlife/Ecological Values
- Indigenous Landscape Values
- Cultural/Historical & Spiritual Values
- Habitation Values
- Subsistence Values
- Transportation Values
- Trapping Values

<sup>25</sup> More details about these TLU values can be found in Woven Paths Consulting (2015b)

Stage 3: Identify key changes in lifestyle and the key drivers for this change.

Stage three used the indicators developed in stage 2 to identify and measure key changes in lifestyle that are linked to the land and driven by industrial development (cumulative and project-specific). This was done by using each indicator as a guide to discussions with participants about changes which they or their families have experienced.

Stage three also asked what participants considered to be the key stressors that led to these changes. Finally, participants were asked to identify what factors they needed to maintain their lifestyle and culture. Each of these inquires aligns with our research questions #2, #3, and #4 identified in Section 1.3).

Stage 4: Determine significance of impacts.

Stage four characterizes the discussion and assessment portion of this CIA. In this stage each valued cultural component is assessed based on the community's experiences and perceptions of change, secondary data sources, and criteria suggested by the CEAA and Barrow (1997). Section 4.4 contains additional detail about the assessment criteria. The results of stage four are summarized in tables in Section 7.

Stage 5: Identify factors to support FCM culture.

Stage five drew from each preceding stage and used focus groups to identify mitigation options that are available and meaningful for the FCM, to reduce impacts on culture due to cumulative or project-specific effects. During focus group discussions FCM members provided feedback on what is required to support their culture in light of current and continued development within the region (section 1.3 research question #5).

## **4.1. COMMUNITY ENGAGEMENT METHODOLOGY**

This study employed a community-driven methodological framework guided by a partnership formed between external consultants (IEG, Woven Paths and Dr. Pat McCormack) and community researchers, who supported an engagement process with FCM that provided cultural expertise and guidance to ensure that community-specific protocols were followed. Two community researchers were involved in the study<sup>26</sup>. The community researchers met in person and by teleconference with IEG researchers to discuss study development and execution of the CIA, and they participated in study focus groups. Three focus groups were conducted, in October and December, 2014, and in May, 2015. More details about the focus groups are provided in Section 4.2.

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<sup>26</sup> Both community researchers were female over the age of 40 and were born in Fort Chipewyan.

This approach was intended to create a collaborative and empowering environment where FCM participants shaped the structure and approach of the research, working jointly with the researchers, and ultimately drive the results. In this way, the findings reflect FCM voice in both information collection and interpretation.

Prior to conducting research, the FCM research team (composed of community researchers and external consultants) reviewed the proposed methods of data collection and documentation. The FCM president then gave consent for the approach and approved the project to move forward. Feedback from the community researchers was incorporated in the final material and data collection approach. All material prepared during the course of this study will be given to the FCM office and archived in the Community Knowledge Keeper (CKK), which is an online data system used by FCM.

At the onset of the community workshops, a letter of informed consent was reviewed and discussed with the community researchers and with CIA focus group members. Community members indicated their verbal consent and also signed the letter. Copies of the letters were scanned and provided to the FCM office for archiving in the CKK. See Appendix 0 for a copy of the consent form.

In addition, FCM and Teck have signed a Traditional Knowledge sharing agreement outlining information sharing protocols and recognizing community ownership and control over their intellectual property.

## 4.2. DATA COLLECTION

We used multiple methods to gather data to identify the key cultural components that are valued by FCM and to identify potential cultural impacts of industrial development (cumulative and project-specific). Table 3 summarizes each method and its purpose. The following section outlines each method and its corresponding process of analysis.

*Table 3 Summary of data collection methods and their purpose*

Data Collection Method	Use / purpose
<b>Focus group</b>	<ul style="list-style-type: none"> <li>• Elicit FCM guidance and input to key research questions; i.e., develop cultural template, explore cultural change and its drivers, and future concerns, and identify mitigation strategies.</li> </ul>
<b>Secondary data gathering</b>	<ul style="list-style-type: none"> <li>• Included a review of relevant literature along with interview data from other studies to validate focus group data through cross verification</li> <li>• Explore cultural change and its drivers, and future concerns, and identify mitigation strategies</li> </ul>

## Focus Groups

We used the focus group method as our primary means to engage Métis community members for the CIA. A focus group is a small group of people brought together to discuss a particular topic, giving participants the opportunity to hear the views of others and respond accordingly within the broader contexts brought forward by the group (Patton 2001). Focus groups are advantageous for seeking reactions, interpreting results and offering advice (Bernard 2000; Patton 2001). The focus group method is also a valuable tool to capture and explore potential variability in perspectives among community participants, as the articulation of beliefs, values and behaviour can vary between individuals of the same culture, reflecting differences in generation, gender, family affiliations, geographic locations of bush activities, and especially personal experience. Finally, the focus group is a highly cost-effective way to meet with many individuals in a short period of time. Three focus group sessions were conducted during the course of this study between October 2014 and May 2015. Table 4 summarizes the purpose of each focus group that was conducted.

*Table 4 Summary of the purpose of each focus group*

<b>Focus group</b>	<b>Purpose</b>
Focus group #1 (Held October 22-23, 2014)	<ul style="list-style-type: none"> <li>• Identify the key cultural components valued by FCM and develop a Cultural Template (see Section 5.1) to assess cultural impacts both Cumulative and project-specific. (Research question 1, Section 1.3).</li> </ul>
Focus group #2 (Held December 10-11, 2014)	<ul style="list-style-type: none"> <li>• Identify how the cultural components identified in the first focus group have changed overtime (Research question 2, Section 1.3).</li> <li>• Identify key drivers (stressors) of cultural changes/impacts and the factors perceived by FCM as obstacles to the maintenance of aspects of lifestyle (Research question 3, Section 1.3).</li> <li>• Identify what is required to sustain and/or strengthen FCM culture now and into the future (Research question 5, Section 1.3).</li> <li>• Discuss the Frontier Project and the potential influences from the Project on FCM culture. (Research question 6, Section 1.3)</li> </ul>
Focus group #3 (Held May 28-29, 2015)	<ul style="list-style-type: none"> <li>• Review and verify results with FCM participants before completing study findings pamphlet for the larger FCM membership.</li> </ul>

Community researchers selected the FCM community members who participated in the focus groups. Their selections were based on the size of the FCM community, on people's interest and availability, and on available and willing representation of three demographic sub-groups, including Elders, adults, and youth. The total number of participants was

fourteen. The Elders subgroup includes individuals over 53 years of age, which represents those individuals born on or before 1960, our temporal baseline. Elders contributed knowledge about FCM culture and their understanding about how it has changed, and they provided suggestions for how to support culture in the future. Nine Elders participated, five men and four women. The Adult subgroup included individuals born after 1960, who have spent much of their lives balancing land-based and wage-labour activities. Five adults participated, one man and four women. Youth was defined for this study as persons less than 30; community researchers were only able to secure a single FCM Youth female member to participate. All participants lived in Fort Chipewyan.

Overall, focus group participants ranged in age from 21 to 71. The inclusion of participants across this age range was intended to account for potentially varying perspectives of different generations. Ideally, the same FCM individuals would have participated in all of the focus groups, but conflicting commitments prevented this from happening. Fifteen participants attended focus group 1, six participants attended focus group 2, and seven participants attended focus group 3. When possible, the same participants from focus group 1 attended focus group 2 and 3. In the future, additional focus groups, or possibly with individual interviews, may be important in the future to provide greater representation of all segments of the population, including those people living in Fort McMurray or Fort McKay. Table 5 provides a summary of details regarding participant demographics.

*Table 5 Participant demographic details*

Focus group	# of youth participants (ages < 30)	# of adult participants (ages 31-52)	# of elder participants (age > 53)	Gender (# of Male / # of Female)
Focus Group #1	1	5	9	(7/8)
Focus Group #2	0	3	3	(4 / 2)
Focus Group #3	0	3	4	(4 / 3)

Focus group discussions were recorded through note-taking and audio recorders, which were turned on only after participants granted their permission. Each recording was subsequently transcribed, and copies of the transcriptions were placed in the ML125 CKK for archiving.

Focus groups included only FCM members who currently reside in Fort Chipewyan, though many FCM members live outside of the hamlet on either a full-time or part-time basis. As well, we originally intended to involve FCM members under the age of 20 in focus group sessions; however, these meetings would have required additional time and cost for meetings in the evenings or weekends, when youth are not in school.

## Secondary data gathering

### *Interviews*

To complement the information acquired through FCM CIA focus groups, seven interview transcripts of key FCM informants that had been archived in the CKK from other FCM projects were analyzed (see Section 4.3 for details about the analysis methodology). These transcripts had been conducted as part of the Métis 125 MLU/TK Study, the Fort Chipewyan Métis Traditional Knowledge Study (FCML 125 2013), Fort Chipewyan Métis Traditional Land Use and Occupancy Study (FCM TLUOS 2009) and the Fort Chipewyan Métis TransCanada Projects Study (FCML 125 2014).

### *Literature Review*

Information from the scholarly literature (e.g., books and journal articles) and from so-called “grey” literature (e.g., FCM-related reports and other unpublished documents) provide important contextual details that aid in understanding the key cultural components and how they have been impacted in the past and may be impacted in the future by industrial development. To conduct the literature review, materials were gathered through online searches, references in relevant documents, library searches, and by contacting colleagues and other known FCM-related sources (e.g., community researchers). Once gathered, the documents were reviewed and information pertaining to FCM culture and industrial impacts was organized according to the key cultural components identified in the material (See Section 4.3 for more details about analysis). The information was then used to corroborate data collected through the analysis of interview transcripts and focus groups described above in order to triangulate results and make assessments

## 4.3. DATA ANALYSIS

Three sets of data are being analysed across all stages of this study, specifically, (i) focus group transcripts (ii) interview transcripts from past studies, and (iii) information from the literature review. Analysis of data began with coding the transcribed focus groups. Coding is a process of organizing data into themes and then assigning meaning to each “theme” (Creswell, 2003). A theme is a pattern of observations that exist across the data collected (Creswell 2003).

A **theme** is a pattern of observations that exist across collected data (Creswell 2003)

Themes were determined using a qualitative content analysis approach (Graneheim and Lundman 2004), incorporating both inductive and deductive approaches to coding, as outlined by Crabtree and Miller (1999), Boyatzis (1998), and Fereday and Muir-Cochrane (2008). Starting with inductive coding, we started analysis by organizing the data (quotes from participants in focus groups) without any

predetermined categories about what cultural components are valued by FCM. Through a process of grouping, and comparing quotes, themes emerged about culture that are important to FCM, particularly with respect to their way of life, system of knowledge, beliefs, and values. Figure 4 below is an example of how this process works. Starting with a quote from the focus group, themes are identified. Similar themes are grouped together. Based on our discussions with FCM participants, this process yielded a concise list of themes that represent cultural components of value by FCM participants. From these groupings, the cultural template and indicators described in Section 4, stage 2 were developed.

**Inductive coding** is a data analysis process that organizes data into themes without predetermined categories.

**Deductive coding** is a data analysis process that organizes data using predetermined categories accordingly. (Graneheim & Lundman 2004)

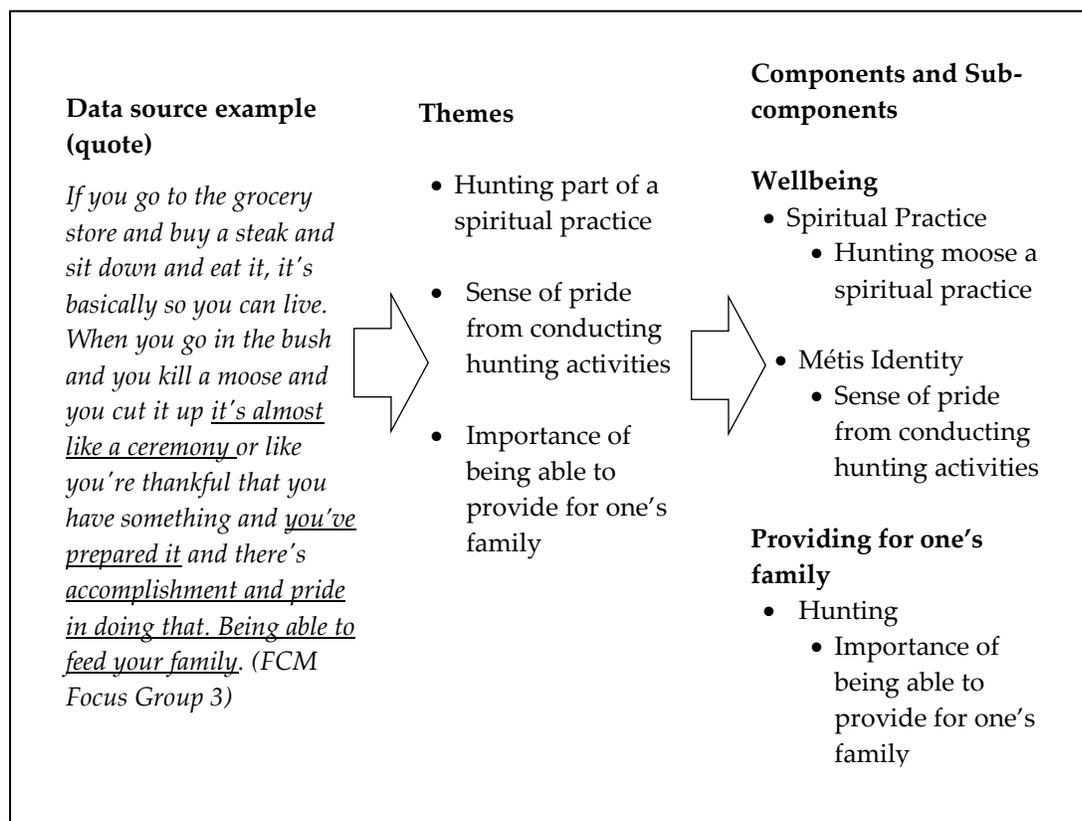


Figure 4 Determining themes,

To understand how industrial development (both cumulative and project-specific) impact FCM culture, we then deductively coded the groupings that make up the cultural template. Deductive coding is a process whereby predetermined categories (in this case categories from the cultural template) were considered along with corresponding measurable parameters to group themes related to changes FCM has experienced as a result of industrial development.

Qualitative data analysis software (dedoose® 5.2.1) was used as a tool to assist with the management of qualitative data from the two data sets listed above. The software was used exclusively as an organizing tool and provided a means for researchers to sort, organize and categorize data in a comprehensive, efficient and systematic way so they could identify themes that might otherwise remain hidden. This is especially important when engaging complex, multi-layered topics (e.g., cultural values) and multiple perspectives among a cross-generational group of both male and female community members. Table 6 summarizes the data sets developed in this study in relation to the data analysis approach used.

*Table 6 Data sets developed in this study and the type of analyses used*

<b>Data set</b>	<b>Analysis</b>
Literature review based on published and unpublished materials (e.g., publications, reports, studies)	Relevant literature was organized in a spreadsheet referencing key ideas and information relative to the study (e.g., context, demographics, and historical perspectives). Potential key cultural sub-components, changes, and drivers of change were highlighted and used to triangulate with focus group data.
Focus Group #1 (audio recordings and notes) and secondary interview data	Focus group audio recordings and/or transcripts were inductively coded to capture the cultural components valued by FCM members. From these key cultural components, key cultural indicators were developed for assessing industrial impacts (cumulative and project-specific).
Focus Group #2 and #3 (audio recordings and notes) and additional secondary interview data	Using the key cultural components developed from Focus Group #1, the audio recording and/or transcript and notes from Focus Group #2 and #3 were deductively coded to identify and assess the industrial impacts to FCM culture now and if the Frontier project were to be implemented. Additionally, deductive coding was used to identify what is required to sustain and or strengthen the culture components valued by FCM.

#### **4.4. CRITERIA FOR ASSESSING CULTURAL IMPACT**

After data analysis, the process of assessing cultural impact was conducted in spring 2015 (see section 7). FCM focus group participants and FCM leadership had an opportunity to review all results prior to making the report public. Their review included a final

determination of significance or discussion of likely and adverse Frontier Project environmental effects on FCM culture.

For purposes of this report, a significant impact on culture is one that is predicted to be caused by or affected by a proposed development. The impact is considered “significant” if it is likely to result in an unacceptable change in the prominent cultural components or the ability of a community to maintain the value or meaning of a prominent cultural component (MVEIRB 2012). In developing criteria for assessing cultural impact, we considered input from CEAA, MVEIRB, and FCM members regarding what changes (or potential changes) that are important and relevant in their community. In Canada, the most detailed publicly available guidelines for conducting a CIA have been developed by the MVEIRB. These guidelines outline a number of significance factors that were taken into consideration.

There is no CIA assessment criteria put forth currently by CEAA (CEAA 1994, 2015); however, CEAA and Barrow (1997) suggest environmental significance assessment criteria that are relevant to this FCM CIA, namely:

- What is the geographic extent of the impact?
- What is the duration of the impact?
- Is the impact reversible or irreversible?
- What is the extent of impact across the community / group?<sup>27</sup>

As put forth by CEAA, the concept of “significant environmental effects” includes effects that are “likely” and “adverse.” Details about how criteria for assessing the significance of impact is outlined in Section 7.

## 5. IDENTIFIED CULTURAL COMPONENTS VALUED BY FCM: STAGE 2

The effective assessment of cumulative and project-specific cultural impacts from industrial activity depends on an understanding of what aspects of culture are important to FCM. Knowing what FCM value about their culture will ensure that this CIA addresses impacts that are most meaningful to FCM. This section of the report outlines the results of stage 2 and provides a Cultural Template developed from stage 2 results depicting prominent cultural components that are valued by FCM participants. The cultural components and sub-components were used as an analytical baseline to understand FCM sense of change to culture since the onset of industrial development c.1960. This discussion is followed by a detailed description of each cultural component emerging from FCM statements in focus groups and interviews. Quotations highlight the key themes in the FCM statements. For more details of how the data (particularly focus group 1) was analyzed to mark themes and identify cultural components valued by FCM, see section 4.3.

Four cultural components valued by FCM participants were identified:

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<sup>27</sup> Based on Barrow (1997) from <http://www.epa.gov/superfund/policy/pdfs/SILitRevFinal.pdf>

- The wellbeing of FCM as individuals and as a society. For this report, wellbeing is defined as a dynamic process that gives people a sense of how their lives are going, through the interaction among their circumstances, activities, and psychological resources (Michaelson et al. 2009);
- Traditional knowledge about living on the land and harvesting its resources and the ability to transmit that knowledge to children and grandchildren;
- The ability to provide essentials of life for oneself and family; and
- The opportunity to gather together in small groups, visiting, and sharing as a community.

These culture components represent the major themes that arose through our analysis, expressed through aspects of the activities of daily living which collectively comprise “lifestyle.” The link between culture and lifestyle is not a linear one, but it is nevertheless useful to use these activities (see section 1.1.) Within each cultural component, sub-components were identified based on groupings of similar themes within the data. The sub-components characterize each valued cultural component. Table 7 identifies each cultural component and its sub-components and a description of what is valued in each.

*Table 7 FCM Cultural Template: Prominent cultural components and sub-components of Fort Chipewyan Métis Culture.*

<b>Cultural Components Valued by FCM</b>	<b>Sub-Components</b>	<b>Description of value associated with each sub component</b>
Wellbeing of FCM as individuals and a society	Spiritual practice	FCM value activities that connect FCM with nature and its spiritual components.
	Being on the land	FCM value their connection to the land, which includes the ability to travel over the land and water.
	Métis Identity	FCM value all aspects of what it means to be Métis, which includes the ways in which they view themselves and their relationship with others in their community and the broader world. They also value activities that they identified as intrinsic to being Métis, such as jigging.
Traditional knowledge	History and Stories	FCM value their knowledge about the land and about their community (i.e., “traditional knowledge”), which has been passed down from one generation to another and which is still going.
	Teaching and Sharing Traditional Knowledge	FCM value their ability to be able to continue to share their knowledge, stories, and skills from one generation to the next, especially as it relates to experiences on the land and the skills and knowledge required to harvest its resources.

Providing	Livelihood	FCM value their ability to support themselves and their families from a wide range of activities, including bush-based resources, wage labor, and entrepreneurial activities.
	Fishing	FCM value their ability to <i>know</i> how to fish and to be <i>able</i> to fish. They value the knowledge, skills, and locations associated with fishing. They also value the fish resource itself and expect the fish to be abundant and healthy.
	Hunting	FCM value their ability to hunt, including the knowledge, skills and locations associated with it. They value the animals.
	Trapping	FCM value their ability to trap, including the knowledge, skills and locations associated with it. They value the fur-bearing animals.
	Plant Harvesting	FCM value their ability to harvest plants, including knowledge, skills and locations associated with it. They value the plants.
	Water	FCM value the quality and quantity of water for use by humans and the environment, including the knowledge, skills and locations associated with it.
	Gardening	FCM value gardening, including knowledge, skills and locations associated with it.
Gathering, visiting, and sharing as a community	Sharing	FCM value opportunities to share stories, traditional knowledge, and food with other in their community.
	Visiting and Gathering	FCM value the places, activities, and opportunities that bring community members together to build relationships, including activities that take place “on the land” (i.e., in the bush).

Supplementary to Table 7, Figure 5 illustrates the cultural template in a form that emphasizes the relationships among cultural components and sub-components. FCM members have indicated their preference for this form in depicting the cultural template.

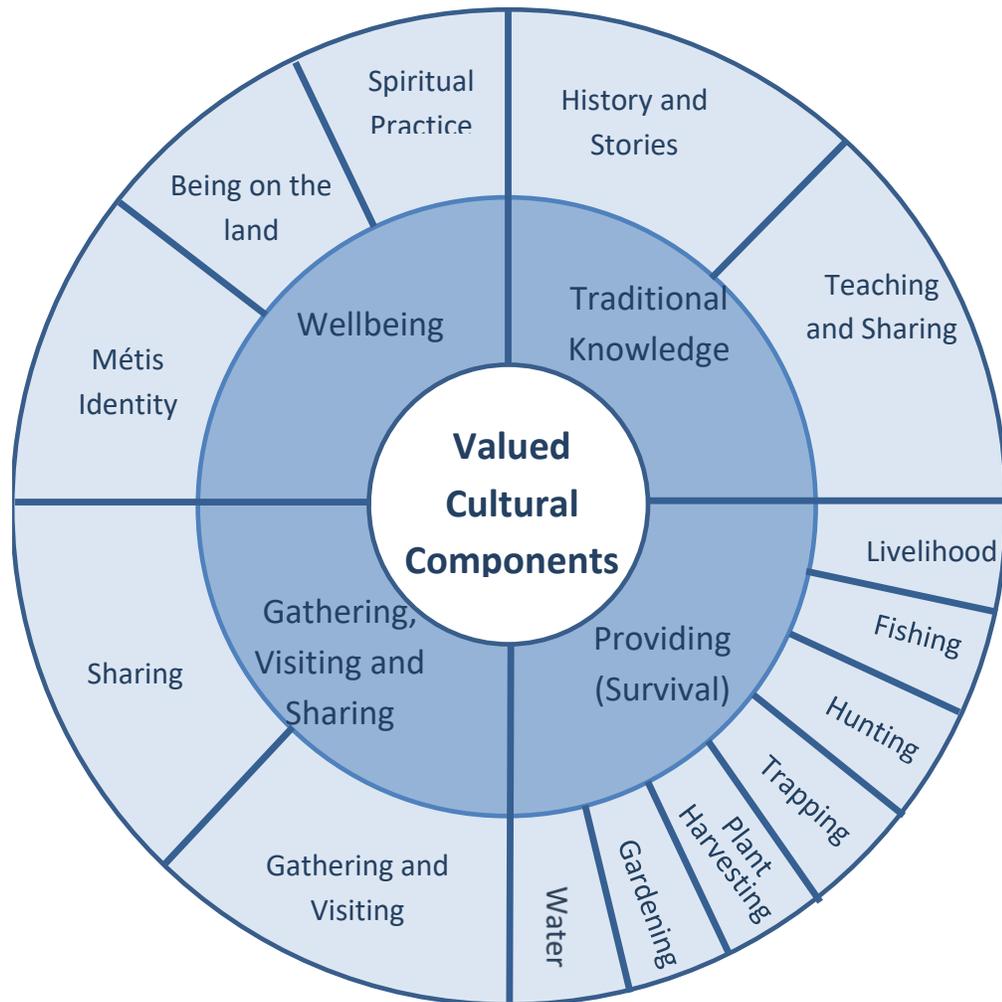


Figure 5 FCM Cultural Template

## 5.1. WELLBEING

Analysis and review of the data revealed that FCM Métis value wellbeing as a key cultural component for FCM. The key subcomponents of wellbeing include spiritual practice, being on the land, and a distinctive Métis identity. The results presented below reflect shared FCM understandings of wellbeing and its role within FCM Culture.

### 5.1.1. Spiritual practice

FCM members identified spiritual practice as an important aspect of wellbeing. Spiritual practices are the activities that nurture FCM members' sense of spirituality through being on the land and conducting traditional activities. Spiritual practice contributes to a state of mind that balances life and creates a sense of happiness and peace that is shared by all people regardless of religion. Spiritual activities mentioned by FCM members included participation

in sweat lodge ceremonies, smudging, and gathering food (FCM focus group 2 and 3)<sup>28</sup>. FCM members describe these activities as “sacred” and practiced by members with knowledge learned through experience (FCM focus group 3).

Participants said that going out on the land provides a sense of calmness, relaxation, and spiritual relief from stress through meditation and that it was critical to being able to meet the daily challenges of life.<sup>29</sup>

[Going out on the land provides] some way to balance all that stress out... You just gotta meditate and say ‘this is the way it is’ you gotta handle it... Yeah go in the bush to relax and meditate. But you just gotta calm yourselves down you just gotta handle it. ...especially health problems. (FCM focus group 2)

Being on the land was also identified by FCM members as be important for fostering a sense of place and sense of self. To participants, places on the land and the activities conducted there connect the community with stories, objects and generations from the past, which has a spiritual dimension. For example, one participant considered his trapline to be a spiritual place because the past and future intersect there through the stories and objects still present:

My whole entire trapline is spiritual to me because my dad and my grandfather are dead and there’s still so many things out there that I’ll notice, but nobody else will, that they did. Or stories that my dad told me that his dad did. And that tree is still standing there with that trap stuck in it ... to me [it is spiritual]. (FCML 125 MLU/EK Study\_ID 02)

In the FCML 125 (2014) study, some FCM members described culturally significant areas as “powerful spiritual grounds” for connecting each generation to the past and present.

### 5.1.2. Being on the land

FCM participants identified “being on the land” as integral to their wellbeing. Being on the land refers to the connections that FCM have with the land in terms of their traditions, spirituality, travel by land and water, other activities conducted on the land, and access to significant places and resources that are significant to FCM people and collectively intrinsic to FCM wellbeing. FCM members say that being on the land maintains their connections

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<sup>28</sup> It should be noted that other spiritual practices related to other religions such as Christianity may be present in the communities. At the time of data collection participants did not discuss spiritual practice relating specifically to Christianity.

<sup>29</sup> The idea of land providing for spiritual health was also reported in FCML 125 (2014), where spiritual health and overall wellbeing for FCM community are drawn from a respectful and reciprocal relationship with the land.

with the land, animals, and plants, and also maintains other knowledge that has supported Métis culture for generations. They describe this connection as a “love of the land”, “tradition”, and “life” itself (FCM Focus Group 1, FCM TLUO Study\_ID12). One FCM member described this connection as important for the younger generations in maintaining their Métis identity. “For our children, going out on the land like our ancestors, our Métis ancestors were founders of this community. We owe it to our children ...to keep their [Métis] culture and lifestyle going” (FCM Focus Group 3).

Being on the land means being able to travel over land and water to reach locations that are important for a wide range of activities. Historically, FCM traveled by foot, dogsleds, watercraft (canoes and boats). More recently, FCM members have added mechanized transport, including snowmobiles, ATVs, and advanced motorboats. Maintaining travel routes and their role in defining place and conveying knowledge about the land and its resources was considered important. For example, access to harvesting locations helps to maintain FCM knowledge about harvesting in those locations and about the foods harvested (FCM workshop 1 and 3).

### 5.1.3. Métis Identity

The sub-component “Métis Identity” encompasses all aspects of what it means to FCM members today to be Métis, including the ways in which members view themselves and their relationship with others in the immediate community, the regional community (including Fort McMurray/Fort McKay/Fort Smith), and the broader world. In focus groups 1, 2, and 3, FCM Métis indicated that they see themselves as a distinct group or community with historically close ties to their Cree, Chipewyan, and European/Euro-Canadian kinsmen and neighbours (e.g., Scots and French-Canadians).

A distinctive aspect of Métis identity is to be “hardworking”. FCM members pointed out that their values about hard work stem from their long history of self-reliance (FCM Focus Group 3). As one participant explained, “[being hardworking] dates back a long, long time, eh. It’s always been that way with us. I think [our hardworking ethic is] why we’ve learned to treat ourselves with pride and dignity” (FCM Focus Group 3). Figure 6 depicts Colin Fraser, the great-grandfather of the current President of Fort Chipewyan Métis and also of many other Métis residents. It illustrates the legacy of hard work that goes back multiple generations.



*Figure 6 Colin Fraser, great-grandfather of the current President of the Fort Chipewyan Métis (ML125). Used with permission from the Provincial Archives of Alberta, B. 10018.*

Yet another aspect of Métis identity involves respecting and looking after the land, the plants and animals that depend on the land, and also respecting and looking after one another (FCML 125 Study ID11; FCM TLUO Study\_ID16; FCM TLUO Study\_ID12; FCML 125 Study ID 11, FCM workshop 3). Working hard to survive and ensuring that one cleans up after oneself were identified as key to this respect (FCM TLUO Study\_ID12). For example, FCML 125 (2014) explained that “environmental stewardship is embodied in FCM culture and is part of FCM identity as Métis peoples.”

Some Metis describe places in the bush as well as in town (Fort Chipewyan) as “home” (focus group 2, and 3), a legacy from their ancestors (FCM Focus Group 3). Many are special places that are connected to their knowledge, stories, and skills FCM (FCML 125 MLU/EK Study\_ID 53). One FCM member said that his trapline is a place that holds a connection to the stories of his father and grandfather, their experiences, and skills that he identifies as Métis (FCML 125 MLU/EK Study\_ID 53).

FCM participants also share in a number of activities that they consider to be an important part of Métis tradition and identity and that continue to be practiced today. These include activities related to cultural arts and craft-making, including beading, music-making (especially the fiddle, guitar, and accordion), and dancing (jigging and square dancing). Members also identified objects such as the Métis sash, a brightly colored belt and multiuse tool formerly worn by men as part of their daily dress as an important symbol of Métis-ness (see Figure 7). Some Metis men still wear sashes on special occasions, and some Metis women have also begun wearing the sash over the shoulder, both to signal their Metis-ness. Some participants spoke about how a sash's colours represent the life cycle of the Métis people and can be customized to reflect a family's or individual's history and experiences (FCM Focus Group 3). One person commented about how these activities are significant to FCM youth:

...all those kids [FCM youth] were born and raised, they all know their tradition they don't forget it eh, it's always in the back of their minds it's not like they're being introduced to something new. (FCM Focus group 1)

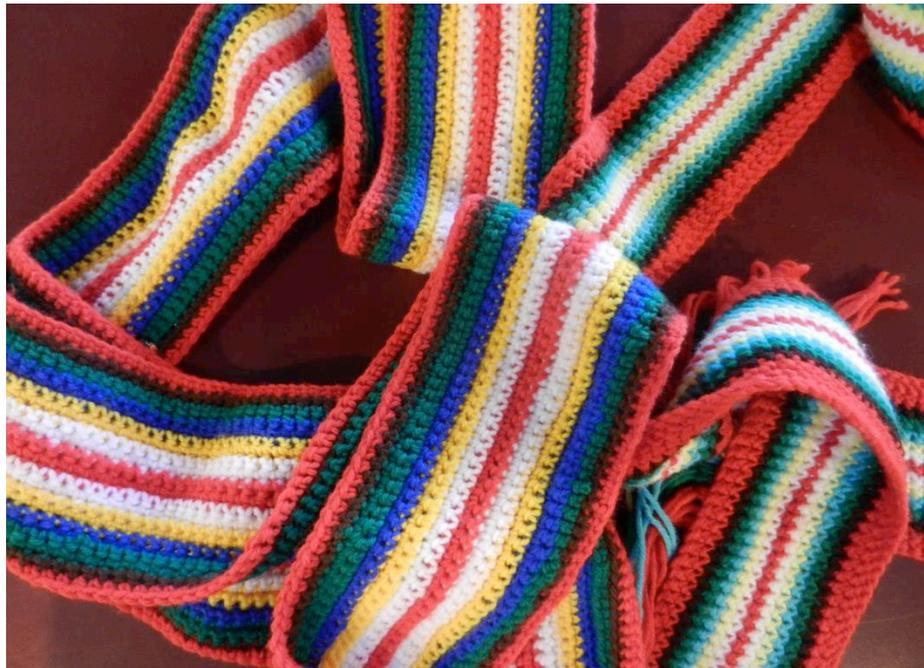


Figure 7 Example of two Métis sashes. Sashes courtesy of FCM 125 member. Photo taken by Ann Garibaldi.

In addition to the cultural activities identified above, several participants identified that activities and skills associated with hunting, trapping, fishing and plant harvesting are intrinsic to Métis identity. For example, participants identified FCM peoples as “harvesters of the land” (FCM TLUO Study\_ID12).

## 5.2. TRADITIONAL KNOWLEDGE

Traditional knowledge about living on the land and harvesting its resources and the ability to transmit that knowledge to their children and grandchildren were identified by FCM focus group members as a key component of FCM culture. They defined their traditional knowledge broadly as including skills, language, and history, which they share that knowledge through stories, teachings, and sharing, as well as activities.

### 5.2.1. Stories and History

For FCM focus group members, the sharing of history and teachings through storytelling are an integral way in which knowledge, skills, and understanding of surviving on the land and other aspects of Métis identity and history are passed down from earlier generations. Within the present-day community, FCM members said that stories are shared by parents and grandparents and are also conveyed through courses in school and workshops at the museum. They convey the history of immigration of FCM ancestors from Europe, and across Canada and Alberta, as well as histories of ancestors living and surviving on the land. Stories are used to express information about significant past events or lifestyles, such as fur-trading and patterns of land ownership, and they are critical tools for conveying knowledge about FCM traditional practices, such as trapping, hunting, and gathering (discussed in Section 5.2.2). Additionally, it was reported in the FCML 125 (2014) study that stories provide FCM with shared meaning and experience across generations, and helps the community to develop social cohesion and a sense of belonging. One FCM participant in the present study expressed the role stories have in conveying the past,

Storytelling is reading about your family history, you learn about hunting stories, you sit around the table ... that's how the information is passed down. (FCM Focus group 2)

Sharing stories around the table is one way to learn about history and events; however, multiple participants argued that just telling the stories is not enough to sustain FCM history, lifestyles, and skills (FCM Focus Group 3). The places and activities associated with the stories are just as important as the stories themselves; the two – stories and experience - go together. One participant explains how writing stories down and sharing them in books isn't enough to really understand the stories and be able to tell your own stories,

We lived it to experience it. You gotta experience it. Books are books, but you gotta experience it. So that's how [children] experience it... you could see a bear and it could come after you. You could see this or that and then they got their [own] stories they could carry on to their friends, their kids, their grandchildren. (FCM Focus Group 3)

Stories are also embodied through the traditional Métis symbols and places. For example, the sash that FCM wear has incorporated within it a unique design representing a specific element of FCM history. For example, when a significant event happens, such as a death, some members will add different colors to the sash to represent these events (IEG workshop 3).

History and stories can be reflected or expressed through place names (Basso 1988). This is no exception for FCM who expressed place names, such as “Big Point,” “Poplar Point,” “Point Brulé,” and “Sled Island,” all of which serve as significant points of reference for rich local lore (see Labour and Hermansen 2011).

### **5.2.2. Teaching and Sharing Traditional knowledge**

Teaching and sharing traditional knowledge refer to the process of how FCM members share and reproduce knowledge from one generation to the next about how to survive on the land. FCM members point out that hands-on experience and practice are key to teaching and learning the skills required for a healthy community. FCM members identified stories as important for teaching about the land and the environment. Participants discussed how stories are often used to teach morals. One participant explained,

I think every story had a lesson of some kind. That's how they were teaching you. So they all had a lesson of some sort. Like if they were talking about hunting in that story there was probably something that you needed to learn and you would remember it if you remember the story. I think that's how the stories were...how they taught us. (FCM Focus Group 3)

Stories were also described as essential to surviving on the land; for instance, they are important for teaching younger generations how to read the dangers of waves on a lake or weather patterns (FCM Focus Group 3). Members cited various examples of such practices, such as using and gathering traditional medicines, trapping and fishing, performing traditional songs and dance, and even how to making the traditional sash (FCML 125 MLU/EK Study\_ID 02, FCM Focus Group 3). For the land-based skills, much of the knowledge that is passed down from parents and grandparents to younger FCM generations takes place on the trapline, at least over recent generations (see AER 2013, Labour and Whitehead 2013).

In many instances, traditional knowledge in Aboriginal communities is taught through and thus closely connected to a particular language (Armitage et al. 2011). Fort Chipewyan Métis speak multiple languages, especially English and Cree but also French and Chipewyan (often called Dene locally). Participants said that Cree was, and is, often spoken out on the land, because the language is tied to the knowledge and practice of surviving. One participant

explained,

It's natural, it just comes out. Like I said when I was being raised that's all we talked was Cree you know what I mean. That's how my grandpa talked to me was in Cree. It's like throwing us on a piece of land and saying 'k, survive'. It would be just natural we'd do it. (FCM Focus Group 1)

Participants reflected that this relationship between language and activities out on the land make language itself “part of [FCM] culture” (FCM Focus Group 3). Languages like French and English were spoken at other times when in town or in other communities.

### 5.3. PROVIDING

“Providing” consists broadly of the ability to provide oneself and one's family with the essentials for a healthy life. FCM members are determined to contribute to harvesting their own food in order to maintain some measure of a traditional diet for their families and community, which also reflects the hardworking mindset and skills of Métis persons. “Providing” includes multiple sub-components: livelihood, fishing, hunting, trapping, plant harvesting, water, and gardening. As one FCM member said in the AER Teck Resources Proceedings in Fort McMurray, Alberta, “[Métis] are survivors. We hunt. We live off the land. We've been doing that all our lives” (AER 2013, pg. 554).

#### 5.3.1. Livelihood

As a sub-component of “Providing”, “Livelihood” refers to the activities involved in securing necessities for survival. Fort Chipewyan Métis have historically relied on both land based activities and wage labour to generate income to support their families (FCM Focus Group 3).

Even today, land based activities are still important and provide many of the subsistence resources that local need and want, including food and skins for some clothing (FCM Focus Group 1, FCM TLUO Study\_ID16). One FCM participant described how previous generations secured the resources they needed from animals like bison,

The only thing [previous generations would] throw away is what they cannot use. And they used to boil the hoofs ...make glue out of it. They did all kinds of things, the old people. They knew how to survive. Plus, they learned from their ancestor, the Indian, how to survive off the land. (FCM TLUO Study\_ID12)

Participants said that in the past, virtually all FCM families participated in some aspect of the fur industry, and many took part in commercial fishing (FCM Focus Group 1). One participant explains how FCM fished and trapped to earn a living,

The commercial fishing ...most of the Métis were the ones that were fishing too and that was their living too, living off the land. Like I grew up in the bush fishing and stuff like that and that's how I made my money trapping.  
(FCM Focus Group 1)

Today many FCM still members of all ages still rely on traditional bush activities (e.g., trapping, fishing, hunting, gathering) to provide sustenance not only for their families and friends. Those people who do not produce food on the land directly are often the beneficiaries of the foods produced by their friends and relatives.

Most Métis also work for wages, with jobs ranging from full-time to part-time or seasonal work. (Labour and Whitehead 2013). Some of this work is employment in the industrial sector, which often means working in distant locations away from family, such as in Fort McMurray. Participants said that people who live elsewhere still strive to use the land in those locations. Some families also generate income through participation in outfitting and tourism opportunities (FCML 125 MLU/EK Study\_ID 53). FCM consider their land-based activities to be critical for the survival of their Métis culture (Focus group 3). Some participants believe that their knowledge and skills required for hunting and trapping can help them maintain a healthy diet as well as a desired connection to the land, history and culture, but they can do so only if a healthy environment exists. One FCM member explained that a healthy environment is essential for FCM survival,

All we're trying to do here is survive, get some land where we can survive in the future, future children, too ...if they're still trapping or go and hunt themselves a moose or whatever there is on the land. Bear or whatever. Caribou. Whatever comes from around. We're trying to save these big game. It's not destroying them.  
(FCM TLUO Study\_ID12)

### 5.3.2. Fishing

Fishing has always been an important part of FCM life. FCML 125 (2014)<sup>30</sup> reported that fish may be considered second to moose as a staple in the traditional FCM diet, and the primary source of food for sled dogs, as well as an important financial mainstay. The commercial fisheries of the 20<sup>th</sup> century were especially important as a local source of income, especially the more recent ones. Fishing for personal food occurs year round, and the catch is preserved by freezing or drying, depending on species. Participants emphasise that fishing is a key practice that connects them with the land and waters and contributes to their quality of life (FCM Focus Group 1). Knowledge about fishing practices and places suitable for fishing is

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<sup>30</sup> See FCML 125 (2014) for a thorough description of commonly harvested species.

important to FCM members and is taught to younger people (FCM TLUO Study\_ID16, FCML 125 Study ID 11). FCM members describe how being able to harvest fish provides a sense of pride and self-esteem. One participant equates the pride one gets from harvesting fish to giving a gift to friends and relatives, “Have you personally ever made something and given it to someone? Same feeling, it’s the same feeling I get from fishing” (FCM Focus Group 3).

### 5.3.3. Hunting

Hunting is a similarly important part of the life and culture of FCM. Hunting provides highly-valued meat that is considered more nutritious than meat sold in the local stores. According to Labour and Whitehead (2013), there are still many FCM members, both Elders and younger members (adults, youth), who rely on hunting to provide food or their immediate and extended families and friends. In the present study, FCM participants reflected on the importance of being on the land to hunt game that includes buffalo, moose, caribou, bear, and birds<sup>31</sup> (e.g., grouse, ducks, geese, and swans). Moose are singled out for their significance as a staple food (FCM Focus Group 1). Caribou meat is also highly valued. Some hunters travel great distances every spring to access barren-ground caribou herds to the north (see also FCML 125 2014).

For some FCM members, their knowledge of hunting also allows them to generate income by providing outfitting and guiding services to incoming hunters. A detailed description of the guiding lifestyle of one FCM family is provided in Labour and Hermansen (2011). The authors state that the majority of guiding took place in the fall for moose hunting, with numerous clients coming from Europe. See also the report by Golder Associates (2007), which documents the outfitting business that an FCM member maintained on his trapline.

Aspects of procuring resources, such as hunting, is more than practical. For some people it is a source of pride and a part of a historic lineage of knowledge that has been transferred from generation to generation. Demonstrating this pride, one FCM participant described how they feel when hunting:

If you go to the grocery store and buy a steak and sit down and eat it, it's basically so you can live. When you go in the bush and you kill a moose and you cut it up it's almost like a ceremony or like you're thankful that you have something and you've prepared it and there's accomplishment and pride in doing that. Being able to feed your family. (FCM Focus Group 3)

Another participant saw hunting as a way for Métis to pass on a tradition from their

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<sup>31</sup> See FCML 125 (2014) for a thorough description of commonly harvested species.

ancestors (FCM Focus Group 3). Additionally, there are also various examples of the value and contribution of hunting to the material culture of FCM. For instance, it was reported in FCML 125 (2014) that certain types of bird feathers have traditional and ceremonial value.

#### 5.3.4. Trapping

Trapping has been an intrinsic part of FCM life and culture since the beginning of the fur trade in the late eighteenth century. The practice occurs yearly throughout the fall, winter, and spring, and for many Métis it has been a family affair, with those families living for extended periods of time on the land. Trapping was important for both food production and for income, through the sale of furs (McCormack 2010). Reliance on trapping for income was much more important historically,<sup>32</sup> still people still trap, although to do so they have to have a Registered Fur Management Area (see FCML 125 2014). One member reflected on the importance of trapping to the life of FCM people by explaining that trapping was central to his life, and he planned everything around it and the trapline where he worked,

...it's my home, I planned my whole entire life to retire there. Like, from when I was young, I always said, 'I'm going to retire in the bush [on my trapline]. (FCML 125 MLU/EK Study\_ID 53)

FCM participants also spoke about the significance of trapping to support a traditional diet, to supplement current diets that rely heavily on purchased foods, and to obtain furs to sell. Some of the commonly trapped animals that participants discussed include muskrats and beavers. Animals discussed in other reports also include wolf, fox, lynx, marten, fisher, mink, and otter (see Labour and Davison 2006, Golder Associates 2007).

Similar to hunting, the practice of trapping, another way of “being on the land”, connects FCM to their culture and heritage. This was expressed in the AER Proceedings in Fort McMurray,

...a trapline functions in many different ways, not just about harvesting. It's about cultural sustenance. It's about spiritual sustenance. It's a locale in which the culture is maintained and carried on and passed on and taught. (AER 2013)

Participants in the FCM study mirror this understanding of trapping as a “tradition” and “lifestyle” intrinsic to FCM Métis<sup>33</sup> (IEG Workshop 3). Trapping is important to obtain traditional ceremonial items and materials for some items of clothing (FCML 125 2014), but

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<sup>32</sup> As indicated in Section 2.2, the fur trade and traditional economy of the region began to erode in the early through mid-1900s and especially after World War II

<sup>33</sup> Today FCM Metis can only trap if they have a trapline (RFMA).

FCM participants in this study also discussed the value of visiting while trapping as an important social component in their lives.

### **5.3.5. Plant harvesting**

Plant harvesting is an important practice that contributes to providing oneself or family with the essentials for a healthy life. FCM members value plant harvesting as a component of their traditional diet and the foundation of their traditional medicines. Rat root, balsam bark, poplar bark and red willow were all identified by participants as important medicinal plants. Raspberries, saskatoons, blueberries, cranberries, and wild onions were identified as important for nutritional value. Other reports have documented that FCM also regularly harvest fiddleheads, chokecherries, strawberries, gooseberries, and pin cherries (FCML 125 2014, Golder Associates 2007).

FCM also utilize plants for spiritual uses, building materials, and firewood. (see FCML 125 2014). They place great value simply on their traditional plant knowledge. According to one participant, it is “knowledge to know what [plant] is good and bad [to use for medicine]”, and it is also “knowledge about which medicine you gotta pick [to help someone when they are sick]” (FCM Focus Group 3).

FCM participants (also in FCML 125 2014) pointed out that it is important to share knowledge across generations about the uses of plants as medicine and food and the locations of plants for collecting. When plant knowledge, particularly medicinal knowledge, is shared by an Elder it is the obligation and responsibility of the recipient to ensure it is passed on in an “appropriate fashion” (FCM Focus Group 3).

### **5.3.6. Water**

Water has long been central to provide FCM peoples with essentials for a healthy life and links to cultural activities (e.g., hunting, fishing). Participants value water as “central to everything... central to our traditional lifestyle” (FCM Focus Group 3). For example, FCM participants in this study indicated that their health and survival depend on adequate water quantity and quality to support the delta ecosystem and its diversity of animals, fish, and plants (FCM Focus Group 3). Describing the link between water and the animals, one FCM member highlights how water influences buffalo migration for the Ronald Lake Bison Herd south of the WBNP, “[Buffalo] use that water source to follow that creek all the way up to their feeding ground because they get fresh water out of there in the wintertime” (FCML 125 MLU/EK Study\_ID 53).

FCM members emphasized that drinking water quality was critical to supporting healthy families. Participants stated that more than 15 years ago, their members drank directly from natural water sources, such as rivers, lakes, groundwater, shallow wells, and snowmelt. One

FCM participant discussed other sources of water, such as birch trees, which can be tapped to access sap that can be used as an equivalent of water.

Culturally and economically, water of the PAD – its rivers and lakes – have long served FCM as transportation corridors, and they have supported and sustained land-based activities. For example, one participant explained, “You need water to get to your places out in the bushes, to get to your cabins or traplines” (FCM Focus Group 3). The FCML 125 (2014) report stated that most analyses of traditional use patterns in the lower Athabasca, including those of FCM, demonstrate a rich density of human use along the edges of rivers and lakes.

The FCML 125 (2014) report also mentions that many FCM members tie historical events to anomalies in water events, such as floods, unusual ice break-up or freeze-up, water levels and/or water quality, which demonstrates that water carries significant historical value. The FCM participants in that report also demonstrated a rich body of knowledge about the subtleties and nuances of water, including currents, foam, flooding patterns, ice formation and break-up, and general appearance, taste and smell. Such knowledge is critical for safe travel on the rivers and lakes in all seasons (FCM Focus Group 1). For example, one participant explained the dangers of fluctuating water levels when the river is frozen,

They have to be careful out there right. And even with them releasing the water, so the water is high when it freezes so then the water drops, so then you have air between the water and the...and then you have that hanging ice right and you don't know when it's going to drop. So you know how dangerous it is to travel but it's got a lot to do with the flow. (FCM Focus Group 1)

### 5.3.7. Gardening

Gardening has long been important to FCM as a means to provide and supplement families with foods that include potatoes, tomatoes, broccoli, cauliflower, strawberries, beets, turnips, Brussel sprouts, peas, onions, lettuce, Swiss chard, and carrots (FCM Focus Group 3; FCML 125 MLU/EK Study\_ID 11; FCM TLUO Study\_ID12).<sup>34,35</sup> Gardening produces in-kind income. As one FCM member stated, “that's how we used to make our money,” (FCM TLUO Study\_ID06). Gardening thereby also contributes to a sense of independence.

Participants explained that gardening as an intrinsic FCM Métis practice because FCM peoples have generally been central to one location. For example, one participant explained

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<sup>34</sup> McCormack (2010) writes that by the late 1800s, most residents of Fort Chipewyan (including traders, missionaries, and freemen) were gardening as a means to provide part of their own food, along with hunting, fishing and berry-picking. Gardening began earlier as an activity by fur traders and their workers.

<sup>35</sup> See also Teck (2011) for lists of common garden crops planted by FCM.

why FCM members had gardens, “the First Nations are hunters and they moved with the food, right? Whereas the [FCM] Métis people were always in the Fort Chip[ewyan] or Big Point and they didn’t move anywhere. They went out hunting, but come home” (FCM Focus Group 3). FCM gardens were grown at multiple locations including in town, at family cabins in the bush, and on the trapline (FCM TLUO Study\_ID16; FCM Focus Group 2). For families that lived on their traplines throughout the year, gardens were critical to subsistence, as recounted by a participant,

We had big gardens. Like I said, we lived there year round. We had to have a garden that would last you. My carrots used to last me from October, November right until the following June. I still had carrots in my cellar. And a lot of canning. (AER 2013)

FCM also place significant value on gardening for the way in which it brings the community together (FCM Focus Group 1; FCM TLUO Study\_ID12).

## **5.4. GATHERING TOGETHER, VISITING AND SHARING**

Based on the focus group and interview data evaluated, the practices of gathering, visiting and sharing are considered key components of FCM culture. The gathering together and visiting of friends and relatives represent the places, events, and opportunities that participants have to come together to demonstrate and share aspects of FCM culture, such as songs, stories and food.

### **5.4.1. Sharing**

FCM members explained that sharing food is about social cohesion and community and making sure that everyone has enough. Sharing in this way has been part of FCM culture for many years, one participant explained:

Years ago when you got a moose you brought it to town here and everybody got, you know, you had to divide it and give everybody a chance to, like a piece of meat to eat. Oh yeah it was all distributed out to, you know, to everybody a chunk here a chunk there, yeah. (FCM TLUO Study\_ID16)

Participants describe that sharing amongst FCM members continues today. One participant explained, “some people can't go out and they really want to eat and they can't get it, so if you have something you'll take it to them and help them out if they're sick and they can't go hunting” (FCM Focus Group 3). FCM members also described sharing as based on creating mutual benefit, with explanations that sharing was a way to return favours,

[FCM people] share. In this area, they all shared whatever they got like that, the moose and that. They all shared. If one kills a moose way inland, he comes back

down, gets the people around there to go and get the meat so they can haul everything. (FCM TLUO Study\_ID12)

#### **5.4.2. Gathering Together and Visiting**

Opportunities for FCM community members to gather together and visit are important for maintaining social bonds and relationships. In interviews, FCM members identified a number of traditional activities that are important for bringing members together to visit. These activities include but are not limited to dog sledding, beading, sweats, hunting, trapping, eating, and traveling. One participant described how gathering and visiting takes place when hunting,

Now they go down the river in the boat and they see three other boats and they stop and that's where your conversation takes place, like right on the river bank, whoever happens to be on the river at the same time. PM: Yeah, that's where you'll be seeing them is in their boats". (FCM Focus Group 1)

Gatherings are often informal and take place in various locations, for example, the river and other waterways are key locations where gathering and visiting take place. One participant explained,

Those things weren't planned. People didn't have a plan to gather they just gathered, so they're coming down the river and they're on their way home and maybe a few people all stop at one camp and well then they had a gathering. Simple as that. (FCM Focus Group 3)

Other important places for visiting include hunting and trapping cabins, the bush in general, and one's place of residence.

### **6. CULTURAL CHANGES AND THEIR DRIVERS: STAGE 3**

Stage three reports key changes in lifestyle and their drivers that are linked to culture since the onset of industrial development (cumulative impacts). Also explored in stage three are the potential impacts on FCM culture from the proposed Frontier Project (section 6.2; Frontier Project-specific impacts). The details provided below are organized according to the Cultural Template and were analyzed using the qualitative indicators and corresponding measurable parameters described in Section 4. The quotes from FCM members provided below are meant to be exemplary evidence of the themes that were identified through the analysis of all data sources.

## 6.1. CUMULATIVE IMPACTS

### 6.1.1. Wellbeing

#### Spiritual Practice

Many FCM participants described ways in which spiritual practices are impacted by the cumulative effects of industrial development. 1. One way that this occurs is when pollution from industrial development affects the quantity and quality of plants used for traditional spiritual practices, resulting in decreased value and usefulness of the plant to FCM for spiritual purposes, such as smudging (FCM Focus group 1 and 3). This change in value may be driven by actual physical changes in the plant (i.e., less potency) or an unwillingness to use the plant due to the perception that the plant is polluted. Describing this impact, one participant reported,

So yeah with the spirituality, with the smudging they need to get the sweet grass right, so if the sweet grass is polluted then they won't be able to do their smudging. (FCM Focus group 1)

This loss of access to some medicinal plants due to contamination is significant for the FCM focus group participants. They described how once these plants are lost it will not be possible to plant them in gardens as an alternative to collecting them in the bush. Participants described that medicinal plants can't be put in gardens, "they don't belong there", "it's disrespectful", and "it's not up to you to grow, it's up to Mother Earth" (FCM Focus group 3).

2. Another aspect of spirituality is the sense of peace that FCM experience while being on the land. Participants explained that today's world is more stressful, due in part to industrial activities, which makes it difficult to maintain a sense of peace and thus all the more important to go to the bush to "de-stress" (FCM Focus Group 1). One participant demonstrated this change by indicating that in the past, "[the people of FCM] didn't know stress", emphasizing that it was not a part of their language (FCM Focus Group 1). 2. However, participants reflected that it is increasingly difficult for some members to go to the bush due to factors related to the costs associated with going to the bush and lack of time because their time is spent working in the wage based labour force. This and fear that in the future industrial development will force them off the land affects their sense of peace. For example, one participant articulated that the biggest change in their spiritual practice is driven by their loss of not being able to go to the bush,

And I think one of the biggest stressors is the future, like what's going to happen to our children, how will it be for them, will there be a quality of life at all for them or are they going to be stressed and bored until the day they leave this earth? If they

can't get out and...if you don't live in the bush then I don't know how you can understand the connection that people who live in the bush and go out on the land, I don't understand how a person who doesn't do that can understand what it means to us to be there and to fish like that if you're fishing. (FCM Focus group 1)

FCM participants also stated that even when in the bush, industrial pollution becomes a source of stress that detracts from their overall sense of peace. In addition to industrial chemical pollution, there are also odors, light pollution, and other visual disturbances that contribute to stress and impact how FCM are able to achieve a sense of peace. One FCM member described that odors from industrial activities can have physical impacts on their health causing them stress,

I smell that stuff [industrial pollution]. By the time I get over here to [Fort] McKay, I really got a damn headache, eh, yeah. (FCML 125 MLU/EK Study\_ID 02)

Another example is the stress experienced due to perceived contamination of the water, air and animals. For instance, participants expressed that the stress they experience by worrying about how their exposure to industrial contaminants in their environment compromises their health,

Like for me psychological [stress], I believe that, like I even want to [move away from here] just because of the cancers that are going around Fort Chipewyan, it's crazy but even I myself, I'm 36 years old and sometimes I even think about going to the hospital just to see if I'm healthy... Like, a couple days ago I thought of this, 'cause I've been coughing so much and I haven't got over a flu or whatever... and I'm kind of like leery of what it is, you know what I mean? (FCM Focus group 1)

### Being on the land

FCM participants identified a range of economic, demographic, and environmental changes that have implications for their ability to go out on the land. These changes are described below. 1. Participants reported that over the decades since the beginning of industrial encroachment into Métis lands, there have been noticeable reductions in the accessibility of traditional places and resources used for hunting, trapping, and plant harvesting. Participants explained one driver of this change in accessibility is decreased water levels in the PAD. They stated that low water levels have restricted travel to hunting areas, partly due to the greater abundance of sand bars that block travel by boat. Further, one participant described how changing water levels is a barrier to accessing cabins for hunting and trapping,

Some people can't get to the cabins now because the water's so low that there's a sandbar there and then they just give up because now they gotta carry their stuff a

quarter mile to the cabin. (FCM Focus group 1)

FCM participants also indicated that the low water levels have resulted in changes to the composition and abundance of aquatic and riparian vegetation in the region, such as greater willow growth in shallow areas. Such vegetation changes have impacted wildlife, such as geese and muskrats (see also JRP 2014). Greater abundance of willows also contributes to more difficult travel in some areas (FCM TLUO Study\_ID16). More detail on water can be found in section 5.2.1 (Water). Participants said that not being able to go out on the land challenges the sense of identity as harvesters of some FCM members and remarked that it can “break a man’s soul” and “pride” of who they are (FCM Focus group 3).

FCM participants described two additional factors related to industrial activities that have impacted accessibility to resources and resulted in the need for FCM land users to travel increasingly further away from home to access locations for hunting, trapping, fishing, and plant harvesting purposes. First, participants claimed that wildlife are responding to industrial activities by avoiding areas subject to excessive noise, light, and smell. Thus, in order to hunt and trap animals, FCM must themselves travel further reach the animals. One participant compares the distances they had to travel before industrial development to after,

...before I went [hunting] here (pointing to a location near the delta) until all this new information [regarding contamination] about the plants and you’re finding out your moose meat [is] infected and... I’m trying to get furthest away from this delta as I can yeah (FCM Focus group 1)

The second factor relates to perceived pollution from industrial activities. FCM members have said that they no longer feel safe harvesting in locations near industrial encroachment because of a fear that the resources may be contaminated with pollution from air or water. Participants described that they travel further distances to harvest plants because of the fear that plants near the delta are contaminated. One participant described that they no longer gather food on the delta and have to travel up the river, “that’s why my food gathering techniques are not off the delta, way down the river, away from Chip North... it’s over 50 miles” (FCM Focus group 1).

These avoidance behaviors correspond to findings in the FCML 125 MLUEK Study, which reports that FCM members have withdrawn from previously used areas because of changes observed in the environment (FCML 125 2014).

2. The ability for FCM members to “be on the land” has also been impacted by economic changes related industrial development. Participants identified that due to the rising cost of living and of being out on the land (e.g., fuel costs), can become increasingly prohibitive. For example, two participants discussed the costs associated with being on the land to hunt moose,

Participant A: “To go moose hunting, just one trip you’re looking at about 4 or \$500. It’s tons of gas. So you have to get moose first trip.” Participant B: “How many trips you had to do before you got one?” Participant A: “Two trips”. (FCM Focus group 2)

Participants indicated that for FCM members that do not bring in high earnings, the cost of going out on the land. Based on the interview data, the rising costs associated with going out on the land appears to be playing an important role in restricting FCM members from spending time on the land to hunt, trap and harvest plants.

An increasing number of FCM land users have taken jobs in the industrial sector to earn a living. Many members work in Fort Chipewyan or out of town in other jobs. FCM participants indicated that being away at work can reduce time on the land and limit opportunities to learn and transfer knowledge about the land, places, and stories related to Métis identity and lifestyle. One participant describes how the changing economic climate has forced FCM to seek employment in industry, making it increasingly difficult to spend time in the bush,

...our communities sometimes have been forced to actually go and work in the oil sands and are not comfortable with it. You know, they don’t want to be there, but they want to feed their families and that’s the reason why they’re there. ...with our lifestyle out here we don’t want to be in the industry we want to live off the land ... but we’re unable to be able to continue living off the land, because the way things have been going with the whole industry. ...I want to see our culture come back. That’s what I miss. (FCM Focus group 1)

3. FCM participants also discussed changes in safety on the land due to cumulative industrial development. Participants stated that before development, “it was only the animals that you needed to be concerned with [for your safety],” but over recent decades, the number of people (e.g., recreationalists) accessing the bush has increased, and FCM members have become increasingly concerned about crime and their safety on the land. As one participant explained:

Take your kids in the bush, you worry about animals and stuff, bears or whatever. Nowadays, I worry when my daughter goes trapping by herself because there’s cut lines and stuff and there’s oil field workers and—you know what I mean? ...It’s a different animal out there, it’s not the way it used to be. (FCML 125 MLU/EK Study\_ID 53)

6. Another safety-related problem is that with fewer people on the land, there are fewer people to help out should someone run into trouble in the bush. This is of particular concern for elderly land users. One participant explained,

So you have these 70 year old guys trying to go out trapping because that's their lifestyle but there's nobody out in the bush anymore, so they're on their own there. If their skidoo breaks down it's not like they have dog teams anymore. ...So there's nobody around, like the traplines are so far apart now. Unlike years ago everybody was close together. (FCM Focus group 1).

Participants also discussed a growing safety concern over thinning of river and lake ice, which affects winter navigation and access to resources (FCM Focus group 2). Participants attribute ice thinning in part to fluctuating flows and climate change, and they assert that river and lake ice is no longer as predictable as it used to be. They recalled that community members have lost their lives due to this hazard. This concern is also discussed in Labour and Whitehead (2013).

An additional FCM safety concern that have been brought up in other reports include river flow alterations caused by project infrastructure (e.g., water intakes; FCML 125 2014). This danger is of particular concern for FCM members that operate barges to haul freight from Fort McMurray.

### Métis Identity

A sense of identity among FCM members in the focus groups is strong, and all participants reflected some commonly felt understanding of what it means to be Métis (see Section 5.1.3), although that does not mean that Métis identity is static. However, there is a difference between what one might consider “natural” change that reflects decisions and choices of the local population and changes that seem to have been forced on Métis due to industrial encroachment on their community and lifestyle.

FCM continue to carry out land-based practices, which they identified as intrinsic to FCM identity. Such activities are outlined in Section 5.3 and include, but are not limited to, hunting, trapping, fishing and harvesting plants. 1. FCM members point out that since industrial development there are fewer opportunities to go out on the land to practice and experience land-based activities (see section 5.1, “Being on the Land,” above). These changes are multi-dimensional with numerous drivers, including changes in the behaviors of animals (i.e., location, travel), reduced numbers of animals and plants available for harvest, fear of contamination, and higher costs associated with these land-based practices (see section 6.1), among others (see section 6.1 “Providing,” below). Participants agreed that limitations in the opportunities for FCM members to carry out land-based practices threaten to undermine Métis identity because it reduces their connection to the land and its resources, a connection linked to the stories, experiences, and skills that are fundamental to what it means to be Métis (see section 5.1). One participant spoke about this problem in relation to children:

If [our children] can't get out [on the land] and ... if you don't live in the bush then I

don't know how you can understand the connection that people who live in the bush and go out on the land, I don't understand how a person who doesn't do that can understand what it means to us to be there and to fish [as a Métis]. (FCM Focus Group 1)

2. Changing landscapes also threaten to reduce the connection FCM have with the stories, experiences and skills in certain locations. FCM members have said that changes in the landscape have made it difficult to recognize once familiar locations. For example, one participant said,

...the country[side] has really changed. The day before yesterday, I went to [another FCM member's] trapline, there across the big lake, you know it's just like my backyard. I know that whole country. I crossed one lake and I got lost. I looked up and the grass was over my head, I went across 3 lakes and I had to turn around and I come back, to go around, till I could recognize the place, it really changed so much. [The grass is] 30 feet high now. (FCM Focus group 2)

3. FCM participants identified themselves as a hardworking people (see section 5.1). Some participants attributed this ethic to maintaining a livelihood out on the land and a history that demanded hard work to survive. For example, one participant references this history when describing the hard working ethic that they identify with, "...being independent [unsupported by government] like that [in the past] makes us strive better to do hard work and to support our families" (FCM Focus group 1).

FCM members claim that currently, this hardworking ethic is not as prominent in the community as it was prior to the availability of industrial employment and opportunities. Participants said that the driver of this change is unclear but indicated that some children seem less interested in learning about how to make a livelihood out on the land. As discussed above, some participants indicated that the rising costs and challenges associated with subsistence living, together with increased access to industrial jobs changes the willingness and how often FCM members can go out on the land and work. This is especially relevant for youth, as expressed by one participant,

The reason why a lot of the youth don't help the elders anymore is because they lost their quality of teachings. I guess you'd say because as the years went on slowly it went away to where the youth, they don't work the way they used to. (FCM Focus group 1)

Table 8 Summarizes community perceptions about the changes in FCM wellbeing that have taken place since industrial development started in the 1960s. The table is organized by the cultural component and sub-components. The cultural baseline is based on results from Sections 5.

Table 8 Summary of changes in FCM wellbeing since the 1960s

Cultural component	Sub-component	Summary	
		Cultural baseline (Pre-1960s)	Industrial cumulative impacts (Post-1960s)
Wellbeing	Spiritual Practice	<ul style="list-style-type: none"> <li>• Being on the land is a spiritual practice and provides a sense of peace, calmness, relaxation, and relief from stress</li> <li>• Places like a trapline are spiritual place because they connect the past, present and future of FCM</li> </ul>	<ul style="list-style-type: none"> <li>• Today’s world is more stressful, due in part to industrial activities, which makes it difficult to maintain a sense of peace and thus all the more important to go to the bush to “de-stress”</li> <li>• Pollution from industrial development affects the quantity and quality of plants used for traditional spiritual practices, resulting in decreased value and usefulness of the plant to FCM for spiritual purposes</li> </ul>
	Being on the land	<ul style="list-style-type: none"> <li>• Maintains their connections with the land, animals, plants, and knowledge that have supported Métis culture for generations.</li> <li>• Ability to access spiritual places, preferred harvesting locations</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced access to traditional places and resources due to low water levels.</li> <li>• Changing movement patterns of animals and perception of contamination often means FCM need to travel further to harvest animals or avoid some locations altogether</li> <li>• Economic changes (rising costs associated with being on the land) have made it difficult for some FCM members to go out on the land</li> <li>• Reduced sense of safety on the land</li> </ul>
	Métis Identity	<ul style="list-style-type: none"> <li>• Hardworking</li> <li>• Respecting the land, the plants and animals that depend on the land, as well as respecting each other</li> <li>• Places where members work and carry out land-</li> </ul>	<ul style="list-style-type: none"> <li>• FCM maintain a strong sense of identity</li> <li>• Fewer opportunities to go out on the land to practice and experience land-based activities threaten to reduce FCM members connection to the land and erode their identity</li> </ul>

		based practices <ul style="list-style-type: none"> <li>• Cultural activities (e.g., beading, music-making) that are an important part of Métis tradition and identity and continue to be practiced today</li> </ul>	as Métis <ul style="list-style-type: none"> <li>• Changing landscapes make it difficult to recognize once familiar locations and threatens to reduce connection with FCM stories, experiences, skills</li> <li>• Hardworking ethic not as prominent as it once was.</li> </ul>
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### 6.1.2. Traditional Knowledge

#### History and Stories

FCM participants indicated that over time, industrial development has altered the degree of knowledge transmission and the use of languages commonly spoken in the past (e.g., Cree, Chipewyan, Michif for one segment of the overall Métis population). FCM members explained that linked to this change is a gradual shift away from listening and sharing traditional stories and a greater focus on other things, such as entertainment technology (e.g., cell phones, video games) (IEG2 focus group). The sense among participants was that broad economic development brought on by industrial development has made these and many other aspects of western culture more accessible. Participants felt that this shift may impact future generations’ knowledge and use of Métis spoken languages other than English.

FCM members had said that the places and activities in which stories are associated and told are just as important as the stories themselves. Now, opportunities to participate and experience land-based activities are being lost due to decreased access (e.g., low water levels, expense of travelling on the land), changing animal behaviours (e.g., animals moving further away), and reduced or polluted populations of plants and animals (e.g., rat root) (see section 6.1). As a result, the stories associated with land-based activities become disconnected from their associated places. One participant expressed what would happen if children only heard or read Métis stories instead of being on the land to experience them,

...[the story] wouldn’t be the same, you have to actually see..., you probably wouldn’t believe [the story]... The meaning gets lost [if you don’t experience it]. You’re taught visual[ly] and by doing it. And if you’re not on the land because you can’t get there, you can’t pass it along to your children, if they’re not there... [the story is] going to be lost. (FCM Focus group 3)

#### Teaching and Sharing Traditional Knowledge

As indicated in Section 5.2, language is intrinsic to Métis culture as it is a carrier of traditional knowledge. Participants indicated that the number of FCM members that speak Métis

languages other than English is declining. Other traditional languages (Cree, French or Michif) are not often spoken within the community; they are more likely to be used out on the land (FCM Focus group 1). However, as described above, fewer people are able to go out on the land due to economic changes brought on by industrial development. The outcome of this, as emphasized by participants, is that fewer people out on the land means less opportunity to speak traditional Métis languages and share traditional knowledge. Participants described this as “forgetting”, “nobody talks in Chip or Cree anymore” (FCM Focus group 1), and “losing a part of Métis culture” (FCM Focus group 3).

Participants also indicated that the perception of contamination of the land, water and air from industrial activities illustrates how industry is playing a role in reducing the transfer of Métis knowledge and skills. For instance, participants pointed out that if they don’t use traditional medicines due to perceived contamination, then their knowledge about traditional plants isn’t shared with their children. One participant said that they don’t give traditional medicine to their children because of the fear it is contaminated with industrial pollutants, “So my kids lose out on that. That part of our culture is just going to be gone” (FCM Focus group 1, FCM Focus group 3). Participants articulated that less understanding within FCM community of traditional knowledge and fewer members speaking Métis languages may result in more difficulties with illness and when members are out on the land. This is because members may not have the traditional knowledge needed to navigate the environment safely and treat illness when out on the land. Explained by one participant,

I think [going out on the land] would be a lot of trial and error [when trying to practice traditional activities] and a few more sick people [because they do not have the knowledge to identify medicinal plants] if nobody went out and experienced firsthand what other people have already experienced. (FCM Focus group 3)

Table 9 Summarizes community perceptions about the changes in FCM traditional knowledge that has taken place since industrial development started in the 1960s. The table is organized by the cultural component and sub-components.

*Table 9 Summary of changes in FCM traditional knowledge since the 1960s*

Cultural component	Sub-component	Summary	
		Cultural baseline (Pre-1960s)	Industrial cumulative impacts (Post-1960s)
Traditional Knowledge	History and stories	<ul style="list-style-type: none"> <li>The sharing of history and teachings through storytelling are an integral way in which knowledge, skills, and</li> </ul>	<ul style="list-style-type: none"> <li>Industrial development has altered the degree of knowledge transmission and the use of languages commonly spoken in the past</li> </ul>

		<p>understanding of surviving on the land and other aspects of Métis identity and history are passed down from earlier generations</p> <ul style="list-style-type: none"> <li>• Stories were also described as essential to surviving on the land</li> <li>• The places and activities associated with the stories are just as important as the stories themselves</li> </ul>	<p>due to a greater focus on other things, such as entertainment technology</p> <ul style="list-style-type: none"> <li>• opportunities to participate and experience land-based activities are being lost due to decreased access, changing animal behaviours, and reduced or polluted populations of plants and animals</li> </ul>
	Teaching and sharing traditional Knowledge	<ul style="list-style-type: none"> <li>• Hands-on experience and practice are key to teaching and learning the skills required for a healthy community</li> <li>• Cree was often spoken when out on the land because the language is tied to the knowledge and practice of surviving</li> </ul>	<ul style="list-style-type: none"> <li>• Fewer people are able to go out on the land due to economic changes brought on by industrial development impacting the opportunity for FCM to speak Métis languages on the land and share traditional knowledge about the land.</li> <li>• Perception of contamination of the land, water and air from industrial activities illustrates how industry is playing a role in reducing the transfer of Métis knowledge and skills</li> </ul>

### 6.1.3. Providing

Providing consists broadly of the ability to provide oneself or family with the essentials for a healthy life and includes fishing, hunting, trapping, plant harvesting, water, gardening and wage- based employment. For FCM to be able to provide essentials for life from the land, they depend on a healthy environment. Industrial development may impact the environment and the cultural sub-components linked to Providing, namely, Livelihood (e.g., wage employment), fishing, hunting, trapping, plant harvesting, water, and gardening. And wage employment. What about entrepreneurial activity as well in this section?

#### Livelihood

The livelihoods of FCM have changed significantly since the onset of industrial development

in the region. Most notable is the way in which FCM members generate income to support their families. Participants note that this change in livelihood was driven in part by closure of the fisheries (Lake Athabasca), and higher costs of living (including higher costs associated with fuel) that followed industrial development within the region. Many FCM members have opted to earn a living by working within the industrial sector, as described by one participant, “I used to commercial fish, there was a drop [in the market] so I had to work with Syncrude for 5 and a half years, fly in fly out” (FCM Focus group 1).

Changes in livelihood may be reflected in people’s outlook on life and the stress experienced while striving to maintain a stable, secure lifestyle. FCM participants contend that stresses in everyday life have increased. These stresses are associated with changes in how they earn a living. For example, some members are unable to participate in both traditional and labour based economies because they either can afford to are don’t have the skills required. Participants state that this can impacted FCM member’s health and overall wellbeing. Reflecting on how these above changes affect some members sense of wellbeing, one participant explained,

[When members are unable to participate in traditional and labour based economies], that’s when [many FCM members] went on welfare. And that was a demoralization... for people. Everybody, especially I think being Métis, we’re always taught, you work for what you want or what you need, and then to have to live on welfare was something that’s degrading. But you have no choice, you have children to feed, you have families to look after. (FCM Focus group 1)

Some of the livelihood stresses that participants described included stress associated with increased cost of living, working out of town, pace of life, less time with friends and family in Fort Chipewyan, and the need to work in the oil sands industry to support their family (FCM Focus group 1). One participant explained some of these stressors associated with working in Fort McMurray,

Well basically it’s hard, you’re away from your family for half a year ... You’ve gotta look for a place to stay, your rent is running you, so basically by the time you come down to it you’re barely making a living by the time you bring your money home, because the cost of McMurray is so expensive. (FCM Focus group 1)

Some participants also expressed that industrial development has changed their outlook on life and future goals and visions. For example, one participant expressed that industrial development is stressful because his plans for the future are inhibited due to the constraints (e.g., contamination, disturbances such as visual, odour, and access) that development puts on the land. Speaking about their home, they reflected how industrial development changes their outlook on the future,

...that whole area is—well, it's home. I planned my whole entire life to retire there. Like, from when I was young, I always said I'm going to retire in the bush. And now it's actually in jeopardy... Yeah, it's not something that I ever thought. (FCML 125 MLU/EK Study\_ID 53)

### Fishing

FCM members described a number of changes to fish and the practice of fishing that they attribute to impacts from industrial development. 1. For example, members have observed physical changes to fish, especially Pickerel, such as changes in colour and texture in the skin and meat. FCM concern over declining fish health and the growing number of deformed fish was also reported in FCML 125 (2014). Such changes make the fish undesirable to eat. As one participant explained:

...[changes in the fish have] really impacted my diet, my traditional diet ok. I grew up on fish and ducks and geese, now I don't eat these no more because they don't taste very good. And my children don't eat them. (FCM Focus group 1)

2. Fish and clam populations is another change observed by FCM members. Along with fish, clams are also an important part of FCM traditional diet. Participants stated that they have observed a drop in clam populations in the delta, reducing their availability as a part of the traditional Métis diet. One participant explained "[the last time I harvested clams] was in the '70s. I believe probably before '72. After that I haven't seen too much" (FCML 125 Study ID 11 FCML 125 (2014) reported similar observations of declines in clam populations. Some members of FCM believe that pollution from industrial activities is the primary driver of these changes to fish and clam populations:

It's all the pollution talk and that fish kill last summer... Although it seems to me that there's a difference in the flesh. Before it used to be firm, like firm flesh and then you fry it or whatever, and now it's kind of mushy or soft, it's just not the same quality of fish anymore. (FCM Focus group 1)

FCM members also suggested that changes in water levels (discussed below) may be driving the reduced fish populations.. One FCM member explained how changing water levels has impacted pickerel spawning locations,

...[the pickerel] quit going over there. ... [when] they put that weir [in] [the Pickerel] quit going over there, ...Yeah, but before that they used to go there and spawn. Yeah, that [was] a nice spawning area, so I don't know where they're spawning now. (FCML 125 MLU/EK Study\_ID 02)

These perceptions of changes in the quality and quantity of fish and clams have important implications for FCM. By limiting consumption, the observations and perceptions of the

effects from contamination and the changing environment have significant impacts on the practice of fishing, especially in terms of FCM's traditional diet. Many participants stated that they and their children don't eat fish because either they are worried about the quality of the foods or they are unable to access fish due to decreased populations. As one participant expressed, they don't eat the fish because they are contaminated, "...we don't eat it anymore. No use to fish if you don't eat it... the fish are dying [because they're contaminated]" (FCM Focus group 1).

Changes in taste and perception of contamination of fish also have important implications economically for FCM. Participants explained that since the onset of industrial development and the rise in concern of contamination, they are no longer able to sell their fish privately. They claimed that fear of industrial contamination was one of the factors that lead to the closing of the fishery on Lake Athabasca:

They didn't want to buy the fish out of Lake Athabasca...Word of mouth, polluted fish, and the fish is not worth nothing, nobody wants it. I even, myself last winter I went to Fort Smith and went to sell fish in Fort Smith and they asked me where the fish came from. And I didn't know, this was my first time ever doing this, I didn't know, I said oh it came from Fort Chip. He said 'I don't want to buy that!' (FCM Focus group 1)

Overall, members have expressed their belief that the changes experienced in fishing, associated with industrial development, diminish FCM member's "pride" and "self-esteem" as harvesters (FCM Focus group 3). Without being able to participate in fishing, some members have been left looking for other means to survive and support themselves (FCM Focus group 3).

### **Hunting**

Hunting is important for FCM for securing traditional foods (see section 5.3), transferring knowledge (see section 5.2), and connecting spiritually with nature (see section 5.1). 1. FCM members described changes to the animals (moose, buffalo, caribou, and birds) as a result of industrial development. For example, FCM members observed that animal movements are different now compared to the pastime prior to industrial development (FCM Focus group 2). They noted that moose and caribou will travel away from industry lights, sounds, smells. Members described how locations that were in the past found to be good hunting locations are no longer good once they are affected by industrial development, because the animals avoid these areas:

I noticed that. Like, some of the birds. Where's all the buffalo? Where did they go? How come there's so many buffalo towards up north? Yeah, there used to be buffalo down here, eh. ...they used to migrate over here. They're telling me they're over here, eh, all this area here. They're not coming this way anymore, not many. ...I figure it's

[industry], something goes into the air, water, winds, the ocean.  
(FCML 125 MLU/EK Study\_ID 02)

FCM members voiced their concerns that changing water levels due to industrial development is also having an impact on the movement of animals and their access to places to hunt (see section 5.3.6; Water). Members claimed that low water levels in the streams and lakes impact the migration of both birds (FCM Focus group 1) and buffalo (FCM TLUO Study\_ID16). One FCM member explained that animals “need water to survive” and that without water they don’t visit certain areas that were once good for hunting (FCM TLUO Study\_ID16). FCML 125 (2014) reported similarly that decreased water levels experienced in recent decades within in the PAD contributed to decreased areas for hunting, increasing stress for both animals and hunters.

2. FCM members have also observed that the physical condition of animals has changed since industrial development began to affect the area. Members describe periodically coming across moose that exhibit unusual structures (bumps), discolouration, taste, and smell. One participant explains, “the moose are full of cancer over this end [of the delta]” (FCM Focus group 2). Some participants believe that these changes are related to industrial contamination in the delta environment (FCM Focus group 2 and 3). For example, one participant explained they avoid eating meat near the delta because they feel it is contaminated and as a result travel further to harvest animals in areas that are not contaminated (FCM Focus group 1). See section 5.1 (being on the land) for more details about changing animal movements.

3. Participants also claimed that hunting activities are negatively affected by an increase in the number of other hunters and users (recreational) on the land as a result of increased access enabled by industrial development and its associated roads and cut lines into areas that were formerly remote (Woven Paths Consulting 2015b). Despite easier access that FCM will experience as a result of increased number roads and cut lines, increased access also enables outsiders to hunt the same animals that FCM want to hunt. The number of animals, especially moose, is believed to have diminished as a result. (see also Labour and Whitehead 2014 and Woven Paths Consulting 2015b). One FCM participant explains this loss of access to moose hunting,

[Industry is] making more roads come in this way so then [workers] can come a lot further on their quads....Like one guy said ‘how can you go moose hunting when you go up to the lake and you turn every corner and there’s a cabin there? How can you expect to get moose? (FCM Focus group 2)

Similarly, FCM member identify that changes in harvesting and diet are related to changes in the number of members participating in hunting practice. Before development, hunting was a very prominent way to provide food for ones family. After development, members reported fewer people engaging in hunting for family subsistence.

### **Trapping**

FCM members described that trapping has changed since the onset of industrial development. Before oil sands development, trapping was a primary source of income and

was practiced by most families in FCM. Participants from FCM articulated that since the mid 1980's, fewer members participate in trapping:

Nowadays it's a hobby ...[FCM] people just now keep their lines open, that's it. ...so they don't make a living on it no mores. The people used to. (FCM Focus group 1)

1. The decline in FCM trapping concerns some members who argue that industrial contamination combined with diminished water levels plays a large role in reducing populations of animals such as muskrat in PAD area. Participants articulated that contaminants in the water, air and plants all contribute to a decline of muskrat in the area. For example, one FCM member explained, "[there are] no muskrats because of pollution in the river" (FCM TLUO Study\_ID12). This is paralleled? By another report identifying water quality as an important factor in the decline of American Coots (AER 2013, FCML 125 2014, Woven Paths Consulting 2015b). See section 5.3 (water) for more details.
2. Participants said that an increase in the number of outsiders accessing the land for hunting and recreation has resulted in more people encroaching on their traplines, making them less productive. For example, more people within or near the trapline has impacted the productivity of the trapline. Impact on trapping due to increased roads and cutlines parallels have also been reported by AER (2013) and Woven Paths Consulting (2015). Participants identify that they now have to deal with poaching and theft. In one case, an FCM member reflected on how these changes have impacted their experience trapping.

It's made me change my way of trapping because you have to now hide your traps better so that [other people on the land] don't rob you when they're going through. So yeah, it has affected me. (FCML 125 MLU/EK Study\_ID 53)
3. In addition to changes in animal populations, participants attribute the current economics of trapping as a product of industrial development, of which has made it more difficult to make a living trapping, when compared with previous decades. For example, one participant explains,

Skidoos keep climbing [in price], parts keep climbing [in price], and by the time it's the end of the season, if you want to go into the trapping industry, you've got your gas, your belts, your sparkplugs, whatever, brakes on there, sliders, whatever. It amounts to lots [of money]. Sometimes, like myself, what [money] I made in a little trapping here, it's all gone [toward] gas. (FCM TLUO Study\_ID12)

Many participants said that instead of trapping, it is easier to seek other wage based forms of employment. Participants explained that many people are taking jobs within the oil industry to support their families rather than trapping. One participant explained how this has impacted their community,

Before the oil sands came it was about ...trapping and after the oil sands it was making the big bucks at the oil sands, ...It's easier to go and work over there and make all this money, than go in the bush

and hunt and trap and fish, so that's when our lifestyle started going down too because of the money. (FCM Focus group 2)

### **Plant harvesting**

Since industrial development, 1. FCM members have observed changes in the composition and location of plants across their traditional harvesting areas, especially in the PAD. For example, participants described that they have observed that some plants are no longer found in areas (e.g., near the delta) where they were once harvested, while in other areas new species (e.g., lemon grass) have been observed. One participant described his observation of new plants in his area,

I notice here now if you ...go walking out in the fields stuff like that, there's different kind of plants that grow there ...they weren't there before ... I've never seen them when I was a young guy. (FCM TLUO Study\_ID16)

This change in the types of plants found near Fort Chipewyan is perceived by some participants to be driven by industrial development in two ways. First, participants feel plants are changing in part due to reduced water levels (see 5.3; Water) altering plant habitats. Second, industrial development has increased the influx of people from other locations into the PAD area. Some FCM members said they believe that new plants are being transported (unknowingly) from one location to another by people coming to Fort Chipewyan from other places (e.g., southern Alberta) (FCM TLUO Study\_ID16).

2. FCM also described changes in plant harvesting. Members described changes to berries found in the PAD. Many participants observed that since industrial development began, berries in the PAD often dried up before reaching maturity. Some attributed this change to contaminating dust blown in from the plants. The perception that medicinal plants may have been harmed by industrial pollution has led to decreased harvesting. One participant explained that they do not like to harvest rat root around the Fraser Bay because they believe it to be contaminated:

You can get [ratroot around here] but they don't want it from around here ...Right now Fraser Bay used to be the biggest, right? A lot of people went to Fraser Bay to get the rat root and now they're telling us that they're getting it from somewhere else because [contamination] is coming in right at Fraser Bay there. (FCM Focus group 2).

Another person in the same focus group agreed: "Some of the rat root that was found [here], you can't even touch it anymore [because it is contaminated]" (FCM Focus group 2). Some participants voiced their fear that the plants now pose a threat to human health, reducing their ability to practice traditional medicine. As one person said:

As for myself, I don't give my kids traditional medicine, because of all the things (pollutants) that are going on, like there's too much traces of cancer, traces of this, traces of that, so I won't give it to my

kids. ...it's all medicine prescription from the doctor or the nurse now. I won't [give my kids traditional medicine] because of all the particles and the diseases in the plants ...it's all a cycle so it's not safe. So my kids lose out on that. That part of our culture is just going to be gone. (FCM Focus group 2)

These changes in the quantity and quality of plants corroborate with other reports that depict FCM plant harvesting activities (FCML 125 2014). FCM members discuss in AER (2013) how these changes restrict FCM members from practicing plant harvesting, a practice is part of their traditional knowledge.

### **Water**

Water quality and quantity are central for providing FCM peoples with a healthy lifestyle (see section 5.1). 1. Many participants observed changes in the quality of surface water in the PAD (e.g., rivers, creeks, and streams). FCM participants said that these changes are a result of industrial development. Kelly et al. (2009) indicates that oil sands industrial development contributes polycyclic aromatic compounds that threaten the health of the Athabasca River. Members have attributed bird deaths, deformities in fish, and the reduction in muskrats to industrial water contamination:

For example, one participant describes the impact of water contamination on muskrats, "well, the chemicals they put into our water ...they should stop all those things. We would still have muskrats in this country" (FCM TLUO Study\_ID12).

Participants perceive that contamination arrives by air contaminants or through the water from spills or general effluents from industry. Many participants feel that contamination is a particular challenge because of the disconnect between industry and the delta:

[Industries are] the ones that destroyed the whole delta, and yet, they don't want to accept the blame. They know they're the ones. The government is to blame to let the oil companies discharge or the towns discharge all their garbage into the water without purifying it. (FCM TLUO Study\_ID12).

Changes to water quality also impact how FCM members perceive water for drinking. Most people will no longer drink water from natural lakes, streams, or rivers, because it is perceived to be contaminated by industrial pollutants. One participant exemplified these sentiments by explaining, "I don't use water off the rivers or anything. I take bottled water ...Oh yeah we used to drink water off any creek, river, anywhere....nobody does [anymore]" (FCM Focus group 1). Similarly, these changes in water quality and lack of willingness to drink surface water in the PAD were identified in AER (2013). Being unable to drink surface water has implications for how long FCM members are able to stay on the land. People are limited by the amount of water that they can carry.

[Being unable to drink the water] just makes it more difficult because you can't go, you can only take so much water in a boat... I can only go out for so many days

because I can only take this much water... I've seen people [in the past] that have packs and a bedroll and a boat, and they take off and they live right off the land and they eat whatever...moose meat, ducks, berries. You can't do that anymore, you gotta take the water so you can't go for as many days as you'd like to maybe. ... now if you have to walk everywhere because it's so far, you can't go by boat anymore to a lot of places [because of low water levels]. If you want to go there you have to walk. (FCM Focus group 3)

2. Parallel to changes in water quality are changes in water quantity, especially in the PAD. Members have observed that since industrial development water levels across wetlands, rivers and creeks have dropped, for example, on participant explains,

I've noticed the water intakes along the river are high water—peak season has declined by half because of the seven water intakes. That's just my theory though. Because how else can that river drop six inches a day? ...that's how much it's dropping here in the past week. It dropped six inches a day, and then all of a sudden in two days, it dropped a foot and a half. (FCML 125 MLU/EK Study\_ID 53)

Participants have identified a number of possible drivers of the decreased water levels in the PAD. Many participants indicated that water levels started becoming an issue when the Bennett Dam began to impound water in 1968 to fill its dam (McCormack 1984). Water levels fluctuated correlate with peak energy demands, and the overall hydrological regime has changed. Similar observations by FCM members have been reported in Labour and Whitehead (2013), AER (2013), Golder Associates (2007), and CBC (2013), which includes the following quote from an FCM member,

Well before this Bennett dam went in, there used to be regular, well not regular floods, but every three to five years we'd have a flood that overflowed the banks. So everybody had animals for trapping on their trapline ... Since they put that Bennett dam in we have no more floods and everything is drying up. There's nothing but willows growing all over in what used to be lakes. (CBC, 2013)

FCM participants have also observed changes in water levels as a result of industrial water withdrawals by oil sands projects along the Athabasca River. It was reported in FCML 125 (2014) that FCM members have been observing decreases in water levels due to industrial uptake from the Athabasca River for over a decade. For this study, one participant explained,

Now the industry is starting to haul water from the Athabasca River. You know, if it takes five barrels to make one barrel of oil, they're doing a million barrels of oil. Then, you know, say if they done that in a day, well that's five million gallons, five million barrels of water. You know, and that's lots of water in a day. And that's only one oil company, what about all the rest? (FCM TLUO Study\_ID16)

Low water levels have reduced waterfowl and muskrat habitat in the PAD, resulting in reduced populations for hunting (JPR 2014). Changes in water levels profoundly impact vegetation and transportation routes introducing challenges for how FCM access and travel to specific locations on the land (see section 5.1). Similar findings have been reported where FCM members have reported that low water levels have made it difficult for FCM members to access traplines (JPR 2014). One FCM member explained how lowering water levels impact travel routes,

Like I said this was the biggest delta, the largest delta in the world at one time. And now there's no water and in any of the [perch] basins, all there is, is just willows growing. The rivers are, you know, that's the only thing that gets you through the deltas now is just the rivers. And some of those are so shallow you can't get through. Oh yeah, this is slowly drying up, it's not too nice out there anymore, yeah. (FCM TLUO Study\_ID16).

Participants believed that low water levels have more profound impacts: it affects their health (physically more difficult to access), spirituality, and traditions (e.g., unable to practice activities that are spiritual or traditional). One participant summarized these impacts,

It affects our health and spirituality and tradition because if we can't get there, like we like...our hearts are mostly on the land. That's where we'd like to be and if we can't get on the land it affects our spirituality. [If] we have a hard time getting to our cabin it affects our health because it's so much hard work, we have to transport everything further. ...we gotta move our cabin. (FCM Focus group 3)

Changes in water quality and quantity may both be affecting ice regimes. For example, participants have observed that ice has changed in colour and breaks up earlier than it used to. Although they were not sure what drives these changes, they felt it was connected to changes in their overall environment. Similar changes observed by FCM members in ice have been reported in Labour and Whitehead (2013). FCM members believe that water contamination is changing ice thickness and is having an impact on break-up and flood conditions in the spring.

### **Gardening**

Gardening is an important cultural activity for FCM peoples. Since the 1800s, gardening has played a role in building a healthy community (see section 5.3). FCM members describe that before industrial development, gardening was an activity that most members participated in. One participant described that this has changed, "everyone used to have a garden here. And now there's probably maybe 10 percent" (FCM Focus group 2).

The reduction of FCM members that garden has been linked in the interviews conducted to industrial development. Participants reflect that fewer people garden because life in Fort Chipewyan has changed, the pace of life is different. Many leave home to work in Fort McMurray making gardening less convenient or impractical.

In addition, other members do not garden because they are concerned about contamination from industrial activity and feel it is no longer safe to grow vegetables. One participant explained, “People are thinking through with all this crap (pollution) in the air, how good is the food that we’re growing? Who knows, right?” (FCM Focus group 3).

As a result of not gardening as much as in the past, participants said that they have lost their ability to provide vegetable food for themselves and their families. One participant explained what is lost when FCM members are not able to garden,

You lose a sense of independence when you can’t do things for yourself. Like when [you] depend on the stores or outside influences to get you what you need, when you can grow it yourself you don’t need to depend on anybody else. (FCM Focus group 3)

Table 10 Summarizes community perceptions about the changes in FCM providing that has taken place since industrial development started in the 1960s. The table is organized by the cultural component and sub-components.

Table 10 Summary of changes in FCM providing since the 1960s

Cultural component	Sub-component	Summary	
		Cultural baseline (Pre-1960s)	Industrial cumulative impacts (Post-1960s)
Providing	Livelihood	<ul style="list-style-type: none"> <li>• Land based activities provide subsistence resources that FCM need and want, including food and skins for some clothing</li> <li>• Relied on both land based activities and wage based labour to generate income</li> </ul>	<ul style="list-style-type: none"> <li>• Changes in how FCM earn income is driven in part by higher costs of living (including higher costs associated with fuel) that followed industrial development within the region</li> <li>• Changes in livelihood has increased stress and impact everyday life, health and overall wellbeing</li> <li>• Industrial development has changed their outlook on life and future goals and visions</li> </ul>
	Fishing	<ul style="list-style-type: none"> <li>• Commercial fisheries were especially important as a local source of income</li> <li>• Being able to harvest fish provides a sense of pride and self-esteem</li> </ul>	<ul style="list-style-type: none"> <li>• Observed physical changes to fish health and quantity as a result of industrial development (contamination, water levels)</li> <li>• Changes in fish has a significant impacts on the practice of fishing, especially in terms of FCM's traditional diet and economic value</li> <li>• Diminished FCM member's "pride" and "self-esteem" as harvesters</li> </ul>
	Hunting	<ul style="list-style-type: none"> <li>• Rely on hunting to provide food or their immediate and extended families and friends</li> <li>• Provides FCM with a means to generate income by providing outfitting and guiding services to incoming hunters</li> <li>• A source of pride and a part of a historic lineage of knowledge</li> </ul>	<ul style="list-style-type: none"> <li>• Observed that animal movements are different now compared to in the past prior to industrial development</li> <li>• Changing water levels due to industrial development is also having an impact on the movement of animals and their access to hunting</li> <li>• Physical condition of animals has changed since industrial development prompting</li> </ul>

		<ul style="list-style-type: none"> <li>• A way for Métis to pass on a tradition from their ancestors</li> </ul>	<p>some FCM members to avoid eating meat near the delta because they feel it is contaminated</p> <ul style="list-style-type: none"> <li>• Hunting activities are negatively affected by an increase in the number of other hunters and users (recreational) on the land as a result of increased industrial development</li> <li>• Changes in harvesting and diet are related to changes in the number of members depending on hunting for subsistence</li> </ul>
	Trapping	<ul style="list-style-type: none"> <li>• An intrinsic part of FCM life and culture since the beginning of the fur trade in the late eighteenth century</li> <li>• Reliance on trapping for income was important historically, but remains important for some today</li> <li>• Supports a traditional diet, supplementing reliance on purchased foods</li> <li>• Connects FCM to their culture and heritage</li> </ul>	<ul style="list-style-type: none"> <li>• Fewer members participate in trapping from in part, industrial contamination that has reduced populations of some animals in the PAD</li> <li>• Increased people accessing the land (often for recreation) via an increased number of roads and cut lines or trails has negatively impacted trapping success</li> <li>• Industrial economy has made it more difficult to make a living trapping</li> </ul>
	Plant Harvesting	<ul style="list-style-type: none"> <li>• Valued as a component of FCM traditional diet and medicines</li> <li>• Represents knowledge about harvesting and use</li> </ul>	<ul style="list-style-type: none"> <li>• Since industrial development, FCM members have observed changes in both the plants in the PAD and practice of plant harvesting and is driven by reduced water levels and the influx of people from other locations</li> <li>• Changes in berries have been observed and believed to be caused by foreign dust found on plants. This reduces value of plant for medicine and other uses.</li> </ul>

	Water	<ul style="list-style-type: none"> <li>• Valued for its centralized role in a traditional lifestyle</li> <li>• Water connects FCM with the animals and plants</li> <li>• Quantity important for transportation</li> <li>• Linked to historical events such as ice break-up and freeze-up</li> </ul>	<ul style="list-style-type: none"> <li>• Observed negative changes to the quality and quantity of water in the PAD that are believed to result from industrial development an impact being on the land (travel, access) and vegetation.</li> <li>• Perceived contamination of water in the PAD limits how long FCM members can be out on the land and impacts FCM health and spirituality</li> </ul>
	Gardening	<ul style="list-style-type: none"> <li>• Important means to provide and supplement families with food</li> <li>• Supplemented income</li> </ul>	<ul style="list-style-type: none"> <li>• Fewer people garden because life in Fort Chipewyan has changed, the pace of life is different. Perceived industrial contamination of air contributes to this impact</li> </ul>

#### 6.1.4. Gathering Together, Visiting and Sharing

##### Sharing

Sharing is an important component of Métis Local 125 culture (see section 5.4). Participants voiced their belief that within FCM community many members continue to share food, stories, and skills with other FCM families and their neighbours. Woven Paths Consulting (2015b) and Labour and Hermansen (2011) similarly report that sharing continues to be important for FCM. For example, Labour and Hermansen (2011) report that trapping areas are shared between brothers or male cousins and passed on to younger generations.

Despite the importance of sharing and its prevalence across FCM members, some participants said that for some members, sharing isn't possible and is linked to changes in the economy after the introduction of industrial development. Many participants said that because it is not possible to make a living selling harvested animals, furs, or plants as it once was (see section 5.3 for more details), some members struggle to make a living. One participant explained that some have less to share because they are unemployed,

...if people had moose in those days, like you shared, everybody shared as far as I know what they had but [FCM] are really limited by what they had to share by the impacts of the oil sands...no jobs.  
(FCM Focus group 1)

##### Gathering Together and Visiting

Visiting and gatherings are two prominent cultural activities that are long-standing within the FCM community (see section 5.4). FCM members that were interviewed said they visit with each other or other neighbors while hunting together or while conducting other

activities such as beading or during sweats. Members often use popular or familiar places, such as along the river, at a cabin or, at home to visit (Woven Paths Consulting 2015b). Although some participants reflected that they still visit and gather on a regular basis, others articulated that because there are fewer FCM members out in the bush they have less opportunity to gather and visit in those locations, especially at familiar landmark places (e.g., river side). For example, one participant remembered how visiting used to be when there were more people living out on the land,

Well there used to be a lot of people living along the river, so say if you came down the river you could stop here and stop there and there's always people [people to visit with]. ...like it used to be everybody'd be out there. (FCM Focus group 1)

Participants linked these reduced opportunities to visit on the land with increased costs associated with being out on the land (FCM Focus group 1). See section 5.1 (Being on the Land) for more details about increased costs associated with being out on the land.

Some participants said that members visit and gather less now because they feel they don't have a location or any facilities in Fort Chipewyan to visit with each other. They said that rental fees to use the community hall in town as a gathering spot is prohibitive. One participant explained,

People used to tell like about their hunting, so if they probably still do, like in our community we don't even have a place to gather like for coffee, like a coffee shop, people used to go together, like say at the lodge and sit around tables and talk, there's not as many places anymore. (FCM Focus group 1)

Other participants said that FCM members have less time to visit because they are working out of town and too busy to visit and gather as they used to,

It's hard [to visit and gather now] because people in Fort McMurray have no time. No time they have for you when you go there. You want to visit, but they're rushing to do this to do that" (FCM Focus group 1).

Participants said that less opportunities to visit and gather has important implications on how history, storytelling are passed on to others, particularly other generations. One participant reflects the importance of gathering to share knowledge and stories across generations,

...we used to go from house to house to visit or like people down the street, so there was quite a lot of visiting and especially between the elders and young people because then you'd get to go to their home and they'd tell you all kinds of stories you know about what it used to be like way back when. Nowadays, when I moved, even when I moved to Fort Chip ...I was surprised to go visit somebody and not be offered anything, it was shocking. (FCM focus group 1).

Table 11 Summarizes community perceptions about the changes in FCM gathering, visiting and sharing that has taken place since industrial development started in the 1960s. The table is organized by the cultural component and sub-components.

Table 11 Summary of changes in FCM gathering, visiting, and sharing since the 1960s

Cultural component	Sub-component	Summary	
		Cultural baseline (Pre-1960s)	Industrial cumulative impacts (Post-1960s)
Gathering, Visiting, and Sharing	Sharing	<ul style="list-style-type: none"> <li>• Sharing knowledge among community members is important because it represents the passage of knowledge to younger generations and helps to guide them in understanding the world</li> <li>• Sharing is about social cohesion and community and making sure that everyone has enough</li> <li>• Sharing is based on reciprocity</li> </ul>	<ul style="list-style-type: none"> <li>• Sharing continues to be important for FCM</li> <li>• Some FCM members share less because of unemployment associated with economic changes experienced in Fort Chipewyan</li> </ul>
	Gathering and Visiting	<ul style="list-style-type: none"> <li>• Activities that are important for bringing FCM members together include: dog sledding, beading, sweats, hunting, trapping, eating, and traveling</li> <li>• Gatherings take place in various locations, e.g., on the river.</li> </ul>	<ul style="list-style-type: none"> <li>• FCM still visit and gather on a regular basis; however, there are less FCM members out in the bush so they have less opportunity to gather and visit, especially at familiar landmark places (e.g., river side)</li> <li>• Participants said that less opportunities to visit and gather has important implications on how history, storytelling are passed on to others, particularly other generations</li> </ul>

## 6.2. FRONTIER PROJECT-SPECIFIC IMPACTS

The proposed Frontier Project will potentially impact FCM culture. These impacts presented below are drawn from the data sources identified above that link impacts on the FCM cultural components (i.e., Wellbeing, Traditional Knowledge, Providing, and Gathering, Visiting, and Sharing) directly to the proposed Frontier Project. When appropriate, impacts were verified with FCM 125 MLUEK Study (Woven Paths Consulting 2015b).

### 6.2.1. Wellbeing

Wellbeing is people's sense of how well their lives are going, their sense of self and place. Land based practices such as fishing, hunting, trapping, plant harvesting are intrinsic to FCM identity and their connection to the natural environment. The proposed Frontier Project footprint will disrupt 29 217 hectares or 292.17 km<sup>2</sup> of the natural landscape, of which currently being used<sup>36</sup> by FCM for land based practices (Woven Paths Consulting 2015b). Land based practices identified within the Local Study Area (LSA; defined in Section 1.2) are connected with specific locations and areas that have historical value and are intrinsic to FCM user's sense of place and identity. As such, the loss of these places and use for land based practices within the proposed Frontier Project footprint directly impact FCM member's sense of connection to the land and Métis identity.

Harvesting resources on the land is an important component of FCM wellbeing. The Frontier Project's footprint will disrupt habitats including that of important species of plants, small fur-bearing animals, and larger mammals. For example, moose migration patterns and bison habitat are located within the footprint area. Operation of the proposed Frontier Project will force animals on the land to respond to the environmental changes through their migratory patterns or relocating further away from the disturbance (Woven Paths Consulting 2015b). These changes to the landscape have important implications for FCM culture, specifically, related to being on the land. In order to practice land based activities, FCM will likely need to travel further increasing the costs associated with FCM livelihood and lifestyle.

The potential impacts on FCM identity are not restricted to activities and places within the LSA and may occur in the total surrounding area of 1683.43 km<sup>2</sup> (Woven Paths Consulting 2015b). Development within the LSA will disturb the sense of peacefulness and spiritual enjoyment that FCM members receive from the land and natural environment. The Frontier project may potential impact ten sites of cultural and spiritual significance in the LSA (Woven Paths Consulting 2015b). Each of these sites, and potentially many more that are not documented, are important for FCM wellbeing. Many participants reflected that visiting these locations on the land enable them to endure that stresses in everyday life (See section 5.1). Disturbances from the proposed Frontier Project threaten to undermine this sense of relief. Fear of contaminants, odours visual disturbances and noise have potential to impact the peace and spiritual rejuvenation that FCM members receive from these places. FCM already identify these impacts from pre-existing industry (See section 6.1).

Places that are culturally and spiritually important will also be impacted by changes in the landscape (e.g., new roads, cut lines) by increasing access to other land users (e.g., industrial workers, recreational users). Increased access to these places opens up opportunities for new uses and may degrade or undermine the space. Members of FCM have already experienced

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<sup>36</sup> 230 TU Values were recorded in the LSA (e.g., land use patterns, plants and animals harvested, activities, indigenous place names, and cultural, spiritual and historical places yielded. Of the 230 TU Values of direct and potential impact in the LSA, 67 of these are in the Project footprint (Woven Paths Consulting 2015b)

more encounters with people on the land and have experienced theft and vandalism within these places (see section 6.1). Similarly, most participants feel increased access to these places as a result of Frontier Project development will put more places in jeopardy of being misused and degraded.

### **6.2.2. Traditional Knowledge**

Traditional knowledge is an important component of FCM culture, embedded in stories, skills, and harvesting practices, among other things. Fort Chipewyan Métis members identify places that are used for sharing knowledge through stories, and lessons, for example, grave sites, old fur trade store, and other significant places of cultural heritage (Woven Paths Consulting 2015b). Woven Paths Consulting (2015b) has identified 26 of these places within the LSA that are likely to experience direct and potential impacts. Within the LSA, the knowledge connected to these places may be lost, directly impacting FCM culture. The loss of use of these places will probably persist into the “Far Future,” over many decades, creating a gap in multigenerational learning. As one FCM member said:

“For 60 years I’m not going to be allowed to step foot on that land that I’ve been hunting for the past 30. Who’s going to be around to teach my children this new area?” Woven Paths Consulting (2015b).

### **6.2.3. Providing**

The Frontier Project footprint disrupts habitat for animals and plants that are intrinsic for FCM to continue harvesting practices. Fort Chipewyan Métis actively hunt, trap<sup>37</sup>, fish, harvest plants and freshwater clams in locations within and surrounding the proposed Frontier Project footprint (LSA). Woven Paths Consulting (2015b) identifies 46 specific habitats, 16 of which are inside the footprint that will be directly potentially be impacted by Project development. Disruption of habitat will result in reduced animal populations for harvesting. Fort Chipewyan Métis will have diminished access to the plants and animals within the footprint area, resulting in a potential decrease of harvesting within the LSA, with fewer opportunities to maintain the values associated with providing.

Fort Chipewyan Métis will also lose access to plants and animals within the area surrounding the LSA. Resources that are near disturbed and potentially contaminated areas are not preferred for harvesting by FCM (Woven Paths Consulting 2015b). As a result, FCM will likely need to travel further to harvest resources. These areas may be unfamiliar to FCM and disconnected from the knowledge and stories and history of places now within or surrounding the LSA. Implications of traveling further include increased costs and length of time required for FCM members, and fewer opportunities to support cultural components associated with those activities such as providing, language maintenance and opportunities for peace in undisturbed spaces. This may result in fewer opportunities for members to teach

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<sup>37</sup> The number of RFMAs that FCM has could not be determined.

and learn about harvesting practices on the land. The costs associated with traveling further also make it less economical to rely on harvesting resources to support individuals and their families.

Reduced access to resources has implications for maintaining a traditional diet. Woven Paths Consulting (2015b) identified 78 subsistence areas in the RSA, 13 of which are located within the LSA. Plant harvesting for food and medicinal purposes is intrinsic for FCM culture (see Section 6.1; Plant Harvesting). The quality of food and medicinal plants are important to FCM. Within the LSA, FCM will not be able to harvest traditional foods and medicines at specific harvesting locations. Participants have identified that at locations near industrial development, fear of contamination, noise, odour may influence how FCM members perceive the quality of plants. This parallels Woven Paths Consulting (2015b) suggesting that avoiding these disrupted areas is a common reaction and a potential driver for stress. Many participants already identify stress from potential contamination from industrial activities and the negative implications on their health and wellbeing.

#### **6.2.4. Gathering Together, Visiting and Sharing**

Development of the Frontier Project footprint will impact the areas and special places that FCM members use to gather, visit, and share for many generations by removing them entirely or rendering them useable during the life of the mine. Special places are tied to a history, knowledge, and use of the land. Woven Paths Consulting (2015b) identified 10 locations with cultural and spiritual significance, four of which include common places within the LSA where participants stop at to gather and visit. The proposed Frontier Project threatens to impact visiting, gathering and sharing by removing access to these locations and the history, stories, knowledge they are connected with.

Visiting, gathering and sharing are part of everyday life for FCM and as such often take place at locations of habitation (cabins, campsites). Woven Paths Consulting (2015b) identified that the proposed Frontier Project footprint and surrounding area directly or potentially impact 28 seasonal/temporary and permanent habitation sites, 8 of which are located within the LSA. Visiting, gathering and sharing is intrinsic to FCM culture and reinforce a sense of belonging and self-identity. Some participants already recognize a sense of disconnectedness with fellow members because they are unable to gather and visit with each other in the ways that they used to prior to oil sands development. If the Frontier project is implemented, it is likely to contribute to this sense of disconnectedness between fellow members.

## **7. DETERMINATION OF SIGNIFICANCE: STAGE 4**

### **7.1. APPROACH FOR DETERMINING SIGNIFICANCE**

This cultural impact assessment examines the potential impacts to FCM culture resulting from both the Frontier Project and from the cumulative effects of industrial development within the Fort Chipewyan region. Determining significance of an impact helps determine an impact's degree of importance and helps focus efforts on mitigation strategies that are

consistent with the interests and values of FCM. For this study a significant impact on FCM culture is one that is predicted to be caused by or contribute to a proposed development and is likely to result in an unacceptable change as determined by participants in the prominent cultural components or the ability of a community to maintain the value or meaning of a prominent cultural component<sup>38</sup>.

The focus in this study is on the significance of impacts from the proposed Frontier Project; however, cumulative impacts play an important role in how FCM members experience a specific project. Therefore, the significance of an impact is measured with both the proposed Frontier Project and cumulative industrial effects in mind.

To determine the significance of an impact on culture from the proposed Frontier Project, we draw from criteria for assessing impacts put forth by the CEAA (2015)<sup>39</sup>, Barrow (1997), and MVEIRB (2012) together with the perspectives of FCM members regarding what changes (or potential changes) are important and relevant in their

community. Table 12 outlines the criteria used to assess significance in this study. The table highlights questions that were considered to determine significance. Each cultural component is examined utilizing these criteria (see Section 7.2). The determination of significance of a cultural impact draws from the primary and secondary data sources as well as from the FCML125 MLU/EK study. The FCML125 MLU/EK study provides information about specific TLU sites within the LSA that is relevant for predicting potential impacts from the proposed Frontier Project. Section 7.3 utilizes the same significance criteria to provide an overall assessment of significance of impact from the proposed Frontier Project.

A culturally **Significant Impact** is one that is predicted to be caused by or contribute to a proposed development and is likely to result in an unacceptable change in the prominent cultural components or the ability of a community to maintain the value or meaning of a prominent cultural component (MVEIRB 2012).

*Table 12 Criteria for determining significance of impact on FCM Key Cultural Components from the Teck Frontier Project*

Criteria	Description	Definition/questions to consider
<b>Geographic Extent of impact</b>	<ul style="list-style-type: none"> <li>• Site specific/ local (significant / insignificant)</li> <li>- Regional (significant)</li> </ul>	<ul style="list-style-type: none"> <li>• How many areas of cultural importance will be impacted? Will the impact affect more than one person or family? Does the impact occur on a culturally unique or highly significant site?</li> </ul>
<b>Duration</b>	<ul style="list-style-type: none"> <li>• Short-term (possibly insignificant or significant)</li> <li>• Long-term (significant)</li> </ul>	<ul style="list-style-type: none"> <li>• Effects occur within one lifetime</li> <li>• Effects occur for more than one lifetime (multi-generational)</li> </ul>

<sup>38</sup> Definition of significance is drawn from MVEIRB (2012)

<sup>39</sup> (CEAA 2015): <http://www.ceaa-acee.gc.ca/default.asp?lang=en&n=CE87904C-1#ws690B4496>

<b>Reversibility / Irreversibility</b>	<ul style="list-style-type: none"> <li>• Reversible (insignificant)</li> <li>• Irreversible (significant)</li> </ul>	<ul style="list-style-type: none"> <li>• Is the impact reversible? Does the impact result in negative irreversible impacts on culture?</li> </ul>
<b>Social Extent</b>	<ul style="list-style-type: none"> <li>• Individual (insignificant)</li> <li>• Group (significant)</li> <li>• All (significant)</li> </ul>	<ul style="list-style-type: none"> <li>• Does the impact affect one individual?</li> <li>• Does the impact affect one family or one small group?</li> <li>• Does the impact affect a larger group or one community? Does the impact affect a broad community demographic?</li> </ul>
<b>Direction</b>	<ul style="list-style-type: none"> <li>• Positive/desirable (insignificant)</li> <li>• Negative/undesirable (significant)</li> </ul>	<ul style="list-style-type: none"> <li>• Does the impact cause a positive or desired change?</li> <li>• Does the impact result in a negative or undesired change?</li> </ul>

## 7.2. ASSESSMENT OF PROJECT-SPECIFIC IMPACTS

The following section is organized by cultural component (wellbeing, traditional knowledge, providing, and gathering, visiting and sharing). Two tables for each component summarize: 1) the potential cultural impacts on FCM culture from the proposed Frontier Project with TLU details gathered from the FCML125 MLU/EK study; and, 2) discussion about the significance of impact. A discussion of cumulative impacts is also included. The impacts summarized this section refer to anticipated impacts to culture prior to any mitigation.

### Wellbeing

*Table 13 Summary of potential impacts to FCM wellbeing*

<b>Wellbeing</b>	
<b>Summary of impacts</b>	<ul style="list-style-type: none"> <li>• Direct and indirect loss of access to medicinal plants due to documented and perceived contamination from industrial activities</li> <li>• Loss of sense of peace and opportunity to de-stress as a result of uncertainty in future opportunities to have places to conduct land based practices</li> <li>• Stress from odours, light pollution and other visual disturbances reduce sense of peace. (As per Woven Paths Consulting, impacts from just the LSA may be felt within an area totaling 1683 km2.)</li> <li>• Reduced access to places on the land due to low water levels, financial barriers</li> <li>• Travel further to practice land-based activities due to industrial development and real or perceived contamination causes stress on participants</li> <li>• New safety concerns when out on the land are a source of stress for participants</li> <li>• Limitations (financial, time, land disturbance, low water levels) in the opportunities for FCM members to carry out land-based</li> </ul>

	practices threaten to undermine Métis identity because it reduces their connection to the land and its resources
<b>Number of recorded TUS sites linked to Wellbeing within the LSA (Frontier project) *</b>	<ul style="list-style-type: none"> <li>• 8.7 km<sup>2</sup> of wildlife and vegetative habitat have been disturbed or in future may be disturbed through already existing pre-approved Project-related activities and planned pre-approved activities. This habitat area has been identified as containing medicinal plants that are intrinsic to spiritual practice and personal health.</li> <li>• Odours, light pollution and other visual disturbances may be felt within an LSA area totaling 1683 km<sup>2</sup>.</li> <li>• 10 sites (e.g., cemetery, future envisioned future burial sites, old fur trade store) were identified as potentially impacted by odour, noise, and visual disturbances within the LSA. These disturbances are linked to an increase in stress and a decrease in sense of peace.</li> <li>• 33 transportation routes including trails on land and waterways are directly or potentially impacted in the LSA. Reduced access to places is linked to impacts on FCM identity and ability to carry out spiritual activities and practices</li> <li>• Within the LSA, 26 place names that are linked to FCM sense of place and identity to be directly or potentially impacted by the Frontier Project.</li> </ul>
<b>Details of impacts within the RSA linked to Wellbeing (cumulative) *</b>	<ul style="list-style-type: none"> <li>• Observed low water levels that inhibit transportation throughout the region.</li> <li>• Observed disturbance (e.g., black film on snow) of areas within the RSA downstream of the Frontier Project. Some participants observe physical health effects from industrial odours present in the RSA</li> <li>• Additional stress may be caused by the influx of outside workers unfamiliar with FCM identity. This influx is considered a potential threat to traditional resource use.</li> </ul>

\* TUS sites linked with cultural impacts are drawn from Woven Paths Consulting (2015b)

Table 14 Significance of impact on wellbeing

<b>Criteria</b>	<b>Discussion</b>
<b>Geographic Extent of impact</b>	<ul style="list-style-type: none"> <li>• The geographic extent of impact on wellbeing extends throughout the LSA and RSA. Sites for spiritual practice located within the LSA will be inaccessible and disturbed because of the Frontier Project. Within the RSA, impacts that arise from noise, odour, and avoidance due to documented and perceived contamination are also occurring.</li> </ul>
<b>Duration</b>	<ul style="list-style-type: none"> <li>• The duration of impacts on FCM wellbeing is as a result of development of the Frontier Project or cumulative impacts from industrial development is long-term. The Frontier Project is expected to have a lifespan of approximately 45 years and will thus impact multiple generations. The loss of spiritual practices, knowledge and</li> </ul>

	values associated with it may result in impacts to FCM’s long-term wellbeing.
<b>Reversibility / Irreversibility</b>	<ul style="list-style-type: none"> <li>• The impacts from the Frontier Project and cumulative effects of industrial development on FCM’s wellbeing are irreversible. FCM beliefs, spiritual activities and values are connected to the land and the locations where spiritual practices take place. Reduced access to these locations (e.g., as a result of low water levels, increased costs to access) coupled with the inability to practice by experience the skills on the land produce negative irreversible impacts on FCM culture.</li> </ul>
<b>Social Extent</b>	<ul style="list-style-type: none"> <li>• The wellbeing of all FCM members may be impacted by the Frontier Project and cumulative industrial development effects. Changes to the environment (e.g., water levels, contamination), access (e.g., increased costs associated with being on the land), and identity (e.g., reduced connection to the land) may impact all members of FCM community. Specific groups (e.g., elders, harvesters, and children) also may be negatively affected by changes in opportunity to practice spiritual activities in places that are disturbed by industrial activities (e.g., odour, noise) or are no longer accessible.</li> </ul>
<b>Direction</b>	<ul style="list-style-type: none"> <li>• The impacts caused from cumulative industrial development and proposed Frontier Project result in a negative or undesired change in FCM wellbeing.</li> </ul>

## Knowledge and Language

Table 15 Summary of potential impacts to FCM knowledge and language

<b>Knowledge and Language</b>	
<b>Summary of impacts</b>	<ul style="list-style-type: none"> <li>• Shift away from listening and sharing traditional stories toward greater focus on other things, such as entertainment “technology” (e.g., cell phones, video games) results in fewer children learning stories.</li> <li>• Stories become disconnected from their associated places and activities as a result of decreased access to specific location on the land.</li> <li>• Fewer people on the land due to economic changes, less opportunities to speak traditional Métis languages and share traditional knowledge on the land.</li> <li>• Documented or perceived environmental contamination reduces the amount people carry out those activities contributing to a reduction in transfer of Métis knowledge and skills</li> <li>• Reduced opportunity to use FCM traditional knowledge and speak FCM languages may lead to more difficulties with illness and when confronted with problems out on the land (i.e., trial and error)</li> </ul>
<b>Number of recorded TUS sites linked to knowledge and language (Frontier project) *</b>	<ul style="list-style-type: none"> <li>• 26 places of cultural heritage have been identified within the LSA that may be impacted resulting in potential losses in knowledge, stories, and connections FCM members have associated with these places.</li> </ul>
<b>Details of impacts within the RSA linked to knowledge and language (cumulative) *</b>	<ul style="list-style-type: none"> <li>• Influx of outside workers unfamiliar with local Aboriginal identity and culture pose a threat to potential conflicts over traditional resource use, access issues to harvest areas</li> </ul>

Table 16 Significance of impact on traditional knowledge

<b>Criteria</b>	<b>Discussion</b>
<b>Geographic Extent of impact</b>	<ul style="list-style-type: none"> <li>• The geographic extent of impact on knowledge extends throughout the LSA and RSA. Sites associated with FCM knowledge about the land are located within the LSA. An assumption has been made the sites are inaccessible during the lifetime of the Frontier Project.</li> </ul>
<b>Duration</b>	<ul style="list-style-type: none"> <li>• The duration of impacts on FCM knowledge is long-term. The sites that are impacted within the LSA will be affected for multiple generations. This will have implications on how knowledge from the</li> </ul>

	sites within the LSA is transferred across generations.
<b>Reversibility / Irreversibility</b>	<ul style="list-style-type: none"> <li>The impacts from the Frontier Project and cumulative effects of industrial development on FCM's knowledge are irreversible. Reduced access to locations within the LSA (e.g., sites disturbed by the Frontier Project) or RSA (e.g., as a result of low water levels, increased costs to access) coupled with the inability to learn by practice the skills on the land produce negative irreversible impacts on the knowledge held within FCM.</li> </ul>
<b>Social Extent</b>	<ul style="list-style-type: none"> <li>The knowledge of all FCM members may be impacted by the Frontier Project and cumulative industrial development effects. Changes to the environment (e.g., water levels, contamination), access (e.g., increased costs associated with being on the land), and identity (e.g., reduced connection to the land) may impact all members of FCM community. Specific groups (e.g., children) also may be negatively affected by changes in opportunity to learn FCM knowledge of the land in places that are disturbed by industrial activities (e.g., odour, noise) or are no longer accessible.</li> </ul>
<b>Direction</b>	<ul style="list-style-type: none"> <li>The degree to which FCM's knowledge, skills, language, and history is transferred through stories, teachings, and sharing is negatively affected as a result of cumulative and site specific Frontier project. Negative impacts are primarily driven by decreased access to locations that are intrinsic to FCM stories and history, perception of contamination.</li> </ul>

## Providing

Table 17 Summary of potential impacts to FCM's ability to provide

<b>Providing</b>	
<b>Summary of impacts</b>	<ul style="list-style-type: none"> <li>• Drop in fur prices, closure of the fisheries, and higher costs of living (including higher costs associated with fuel) has decreased FCM ability to sell furs and fish. Many FCM members earn a living by working in the wage based economy</li> <li>• Increased stress associated with increased cost of living, working out of town, pace of life, less time with friends and family in Fort Chipewyan, and the need to work in the oil sands industry to support their family</li> <li>• Changes to FCM livelihoods (traditional economies and conventional economies) impacts their outlook on life and future goals and visions</li> <li>• Documented and perceived contamination may be responsible for changes in fish, animals, plants include physical changes, abundance. This has resulted in people traveling further for hunting, fishing</li> <li>• Reduced water quality and quantity are perceived to be responsible for changes in fish, plant, animal populations and has led to changes in harvesting practices (amount, frequency)</li> <li>• Changes in water quantity and ice characteristics impact FCM's ability to travel to conduct land based activities</li> <li>• Observed effects of contamination and the changing environment (e.g., reduced water levels) have reduced the time that FCM members spend supporting their traditional diet</li> <li>• Loss of access to harvesting activities diminishes "pride" and "self-esteem" as harvesters</li> <li>• Increased access by other hunters and recreational increases competition for land based activities such as hunting, trapping</li> <li>• Reduced opportunities to go out on the land and make a living harvesting due to increased costs associated with travel</li> <li>• Fewer FCM members garden as a result of concerns of air and water contamination and less time due to wage based employment</li> </ul>
<b>Number of recorded TUS sites linked to providing (Frontier project) *</b>	<ul style="list-style-type: none"> <li>• Disruptions to animal and plants habitats that are intrinsic for FCM to continue harvesting practices and support their livelihood, 15 specific habitats will be directly or potential be impacted by the proposed Frontier Project</li> <li>• 8.7 km<sup>2</sup> of wildlife and vegetative habitat have been disturbed or in future may be disturbed through already exiting pre-approved Project-related activities and planned pre-approved activities. This change in habitat area has been linked to reductions in wildlife populations changes in wildlife movements contributing reduced</li> </ul>

	<p>access to traditional land based activities (e.g., hunting, trapping, plant harvesting).</p> <ul style="list-style-type: none"> <li>• 78 sites were identified within the LSA where subsistence activities (e.g., hunting, fishing, and plant harvesting) are carried out that will be potentially impacted by the Frontier Project. The impact on these sites as a result of contamination, noise, and increased traffic in the area is linked with reduced access to traditional land based activities, knowledge transmission and use of traditional languages.</li> <li>• Areas where FCM avoid due to industrial disturbance will be 44km closer after the Frontier Project is developed than before development. Increased areas of avoidance is linked to reduced access to land based activities (e.g., hunting, fishing, and plant harvesting)</li> <li>• 9 areas important for trapping are directly and potentially impacted by the Frontier Project</li> </ul>
<b>Details of impacts within the RSA linked to providing (cumulative) *</b>	<ul style="list-style-type: none"> <li>• 31 sites within the RSA representing habitat areas will be directly or potentially impacted by industrial development.</li> <li>• Further reduce land base available for FCM to access. This results in intensified competition for resource harvesting in remaining areas, and reduce harvesting opportunities.</li> <li>• Observed contamination within the RSA impact FCM harvesting activities</li> <li>• Observed changes in wildlife quality and quantity within the RSA have impacted harvesting practice and land use patterns.</li> <li>• Industry expansion and disturbance to southern harvesting areas along the Athabasca River corridor have reduced access and use of resources in preferred use areas. Finding other equally viable areas may be difficult to access, or further away.</li> <li>• Increased costs to go out on the land has limited some FCM members</li> </ul>

Table 18 Cultural impacts to providing

<b>Criteria</b>	<b>Discussion</b>
<b>Geographic Extent of impact</b>	<ul style="list-style-type: none"> <li>• The geographic extent of impact in FCM's ability to provide extends throughout the LSA and RSA. Sites associated with FCM harvesting are located within the LSA. These sites will be inaccessible during the lifetime of the Frontier Project. FCM members have also observed changes in the quality and quantity wildlife and their movements within RSA.</li> </ul>
<b>Duration</b>	<ul style="list-style-type: none"> <li>• The duration of impacts on FCM's ability to provide is long-term. The sites that are impacted within the LSA will be affected for</li> </ul>

	multiple generations.
<b>Reversibility / Irreversibility</b>	<ul style="list-style-type: none"> <li>The impacts from the Frontier Project and cumulative effects of industrial development on FCM's ability to provide is irreversible. Reduced access to locations within the LSA (e.g., sites disturbed by the Frontier Project) or RSA (e.g., as a result of low water levels, increased costs to access) coupled with observed changes in the patterns of wildlife movement, quality and quantity produce negative irreversible impacts on the FCM's ability to provide.</li> </ul>
<b>Social Extent</b>	<ul style="list-style-type: none"> <li>Resulting of the Frontier Project and cumulative industrial effects, changes to FCM's ability to provide will impact all FCM members. Changes to the environment (e.g., water levels, contamination), access (e.g., increased costs associated with being on the land) may impact all members of FCM community. Specific groups (e.g., Elders, harvesters, and children) also may be negatively affected by changes in ability to provide as a result of reduced access to preferred harvesting areas or disturbances experienced on the land (e.g., odour, noise).</li> </ul>
<b>Direction</b>	<ul style="list-style-type: none"> <li>Cumulative and site-specific impacts that result in a decreased land base near Fort Chipewyan negatively affects one's ability to provide the essentials for a healthy life. Driven by reduced water and land-based access to environmental activities (e.g., hunting, trapping, fishing, plant gathering), environmental changes (e.g., water levels), increased costs, avoidance due to documented or perceived contamination, and animal behaviour.</li> </ul>

## Gathering Together, Visiting and Sharing

Table 19 Summary of potential impacts to FCM's ability to gather, visit and share

<b>Gathering Together, Visiting and Sharing</b>	
<b>Summary of impacts</b>	<ul style="list-style-type: none"> <li>• For some FCM members, may be unable to share bush foods with other members because they are unable to generate enough income for themselves selling harvested animals, furs, or plants</li> <li>• Reduced opportunity for FCM members to gather and visit at familiar landmark places. This is linked to increased costs associated with going out on the land to gather and visit, especially at familiar landmark places</li> <li>• Less time to visit and gather, due to wage-based employment</li> <li>• Reduction in the passing of stories to other generations</li> </ul>
<b>Number of recorded TUS sites linked to gathering, visiting and sharing (Frontier project) *</b>	<ul style="list-style-type: none"> <li>• 4 sites some of which have been used commonly by FCM members to stop at and gather and visit (e.g., along the river) were identified to potentially be impacted by odour, noise, and visual disturbances within the LSA. These disturbances are linked to a reduction opportunity to visit on the land.</li> </ul>
<b>Details of impacts within the RSA linked to gathering, visiting and sharing (cumulative) *</b>	<ul style="list-style-type: none"> <li>• The proposed Frontier Project footprint and surrounding area directly or potentially impact 28 seasonal/temporary and permanent habitation sites in the RSA.</li> </ul>

Table 20 Significance of impact on FCM's ability to gather, visit and share

<b>Criteria</b>	<b>Discussion</b>
<b>Geographic Extent of impact</b>	<ul style="list-style-type: none"> <li>• The geographic extent of impact on FCM's ability to gather together, visit, and share extends throughout the LSA. Sites associated with FCM gathering, visiting and sharing are located within the LSA. These sites will be inaccessible during the lifetime of the Frontier Project.</li> </ul>
<b>Duration</b>	<ul style="list-style-type: none"> <li>• The duration of impacts on FCM's ability to gather, visit and share in locations within the LSA is long-term. The sites that are impacted within the LSA will be affected for multiple generations.</li> </ul>
<b>Reversibility / Irreversibility</b>	<ul style="list-style-type: none"> <li>• The impacts from the Frontier Project on FCM's ability to provide is irreversible. FCM will no longer have access to sites within the LSA where they once gathered, visited and shared. These sites will not be available for other generations to gather, visit and share resulting in negative irreversible impacts.</li> </ul>

<b>Social Extent</b>	<ul style="list-style-type: none"> <li>Resulting of the Frontier Project, changes to FCM’s ability to gather, visit and share will impact specific FCM members. Elders, harvesters, and children may be negatively affected by changes in ability to gather, visit, and share as a result of reduced access to familiar landmark places that may be disturbed within the LSA.</li> <li>All members of FCM society are confronted with economic changes that may limit one’s ability to go out on the land to gather, visit and share.</li> </ul>
<b>Direction</b>	<ul style="list-style-type: none"> <li>FCM continue to share with each other in gatherings and home visits, however, cumulative impacts related to economic changes negatively impact opportunities for FCM members to visit and gather while on the land. The results indicate that increased costs and changing work schedules as a result of wage based employment contribute to reduced opportunities to gather and visit overall, and specifically in the manner that FCM member’s desire.</li> </ul>

### 7.3. OVERALL SIGNIFICANCE OF POTENTIAL FRONTIER PROJECT

Table 21 Overall significance of cultural impacts from the potential Frontier Project

<b>Criteria</b>	<b>Assessment</b>	<b>Rational</b>
<b>Geographic Extent of impact</b>	Site specific, local, regional	Access to and utilization of spiritual and land-based practices will be negatively impacted within the LSA of the Frontier Project as this location will be inaccessible for these uses. Other impacts such as avoidance due to documented and perceived contamination, changes in the movement of animals and diversity of plants will have a local and regional negative impact. FCM members will need to travel further, increasing costs and reducing access to spiritual and harvesting locations. Economic changes also impact on a local and regional scale.
<b>Duration</b>	Long-term <sup>40</sup>	The duration of impacts on FCM culture (potential or experienced) as a result of industrial development (specifically from the Frontier Project) is long-term, and with an anticipated project lifespan of 45 years will last more than two generations. The loss of knowledge, skills, and values resulting from reduced opportunities to share with younger generations, the land based and spiritual activities, traditional language, and stories that are central to FCM culture.

<sup>40</sup> Long-term is described as more than 2 generations.

<b>Reversibility / Irreversibility</b>	Irreversible	The impacts from industrial development and the Frontier Project are irreversible. FCM beliefs, activities, and values are connected to the land and the locations where harvesting, and spiritual practices take place. Reduced access to these locations (due to for example, increased costs and environmental changes) coupled with the inability to practice by experience the stories and skills on the land in order to understand and transfer knowledge and skills produce negative irreversible impacts on FCM culture.
<b>Social Extent</b>	Individual, Group, All	Broad impacts like those caused by economic changes (e.g., contamination, stress) will affect all FCM members. Specific groups (e.g., elders, harvesters, children) will also be negatively affected by changes in opportunity to practice land based activities (e.g., increased costs, necessity to travel further to harvest, changes

## 8. ADDRESSING ADVERSE EFFECTS: STAGE 5

As the results and discussion of this study have demonstrated, FCM believe that industrial development has and is continuing to limit opportunities to carry out traditional practices within their homelands, which is having significant repercussions on Métis culture. This pattern of change is worrisome because not only is the current scale of regional industrial development substantial, but the pace of development in the region is also increasing (see Berryman et al. 2013). In response to the change, FCM require a long-term vision with strategies that support the current and future needs of the community. Such strategies will work to: (1) minimize adverse cultural effects resulting from both project-specific as well as cumulative development; and, (2) maintain and strengthen FCM cultural integrity into the future.

The FCM members who participated in this study have shared their perspectives on what this long-term vision would entail, and the discussion below outlines some of the key strategies that were discussed. Other perspectives are drawn from related studies (FCML125 MLU/EK study). The FCM leadership asked that specific mitigation strategies to reduce cumulative and project-specific impacts on culture not be included in this report; they remain confidential at this time. As a result, the broad mitigation strategies identified below are starting points and should be understood as conservative or minimal strategies to begin the process of mitigating cumulative and projects specific impacts to FCM culture.

## 8.1. GOVERNANCE, IDENTITY, AND CULTURAL RESILIENCE

FCM participants placed emphasis on the importance of securing a certain degree of sovereignty over the decisions and changes that are playing out within their homelands and impacting their families, community, and culture. The community requests recognition from industry and government that they are “a People” (FCM Focus group 1), that they have historic and traditional ties to the land, and that they deserve meaningful and effective input on development that impinges upon their collective future. These aspects of identity and sovereignty are critical to building resilience and a capacity to adapt to change. As described in Lalonde (2006), measures of wellbeing and cultural resilience in Aboriginal communities are dependent on the community’s efforts to promote their cultural heritage, reassert ownership over their past and future, and to expand the knowledge base that has enabled them to adapt.

Strategies that FCM participants identified include the development or improvement of the systems and programs that support health and well-being. For instance, FCM members would like to see improvements in housing, healthcare, water delivery and treatment, and support for local industry, they want to be consulted for their input on how such improvements would be implemented. The range of ideas for improvements were expressed by one FCM member with the following statement,

There's a lot of things can be done in Fort Chipewyan. We can upgrade our water treatment plant and there's a lot of homeless people here. A lot of single mothers, single fathers, that don't have houses. We can even build housing. There's many a things that can be done. (FCM TLUO Study\_ID12)

## 8.2. RECLAMATION

FCM participants are concerned with protecting and restoring ecosystem integrity and traditional land use (TLU) potential within their homelands, and they have indicated that they would like to be directly involved and consulted in reclamation planning and monitoring for any oil sands projects that proceed with development. Should the Frontier Project receive approval, traditional land-use opportunities will inevitably be reduced or eliminated within the Project footprint and some surrounding areas for at least the lifespan of the Project (~45 years), and likely longer, into the “Far Future.”<sup>41</sup> In an effort to offset the

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<sup>41</sup> Even at mine closure, progressive reclamation is unlikely to have resulted in a landscape that resembles pre-disturbance conditions. While reclaimed areas may indeed be on a trajectory towards recovery of some biodiversity and ecological function, it is unlikely that they will support a pre-disturbance range of traditional activities. Thus, with regards to traditional use potential and cultural heritage, the impact of oil sands mine disturbances ultimately extend far into the future.

negative cultural and ecological impacts of project development, FCM members recommend that Teck and other companies initiate a participatory reclamation planning process with FCM immediately upon project approval. As part of this process, FCM participants suggest that companies:

- Develop and maintain an active FCM consultation and engagement program to collect and incorporate FCM knowledge and input on reclamation objectives into reclamation plans, as well update the community on project development and reclamation; and,
- Support research on reclamation techniques to successfully restore the TLU capability of peat-forming wetlands, which are of particular importance to FCM community.

To our knowledge, no oil sands operator has yet demonstrated the successful return of ecosystems supporting traditional uses. Thus, there is opportunity for Teck to become a standard-bearer for how reclamation for the return of traditional-use species might occur, including how traditional knowledge relevant to reclamation planning is collected and integrated in a culturally meaningful way. Studies by the Biodiversity Task Group of the Reclamation Working Group of Cumulative Environmental Management Association (CEMA) have found that Aboriginal groups in the oil sands region have been interested in participating in reclamation planning based on community-specific approaches developed in cooperation with concerned communities.<sup>42</sup> FCM members suggest that Teck may find this community-specific approach a useful tool when developing opportunities for FCM people to participate in reclamation planning.

### **8.3. CULTURAL HERITAGE AND LANGUAGE RETENTION**

FCM participants in this study expressed growing concern over the progressive loss of traditional Métis knowledge and language (e.g., Cree, Dene) within the community, and they emphasized the need to develop and implement programs to support knowledge and language retention. As documented in the results above (Traditional Knowledge; Section 6.2), the degree of knowledge transmission and use of language has diminished in conjunction with increasing development, as many aspects of western culture (e.g., technology like cell phones, video games) have become more accessible to the younger generations. To address the adverse effects associated with these changes, FCM participants were united on the need for an FCM “cultural center,” where youth (and even adults) could be enrolled in Métis culture and language programs:

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<sup>42</sup> See SENES Consultants Limited (2011) and The Two Roads Research Team (2011).

I'd like to see a cultural centre where we can teach whatever languages that the people want to speak and where we could gather, like that was one of the biggest things, like [teaching how to prepare] moose hide, or hunting ducks or whatever. (FCM Focus group 1)

Participants also discussed incorporating language programs and community land-based learning into the school curriculum, where Elders would be invited to teach aspects of traditional knowledge:

We could have a traditional knowledge program. Where we get the elders to come in like every month a different elder or something and they can teach different things... like they teach native languages in the school but a traditional knowledge one will be good for our youth, even some of us. (FCM Focus group 2)

Additionally, FCM participants suggested that “cabin packages,” or support to build cabins, would facilitate increased time on the land and help to offset the rising costs and distance involved in accessing the land (see results, Section 5):

Yes it [a cabin package] is going to be helpful. It's going to be helpful for me because I [have a] trapline. I want to get a cabin on there but I can't afford it. I gotta wait until I get my pension ... I can't make one. (FCM Focus group 2)

#### **8.4. LAND-BASED EMPLOYMENT**

FCM participants indicated that they would like to see the return of more local land-based employment within Fort Chipewyan. As documented in the results (Section 6.1), the drop in fur prices, closure of the fisheries, and the higher costs associated with goods and fuel have forced many FCM members to find seek employment in the energy sector or apply for welfare, which has had major repercussions on individual and community wellbeing. However, FCM believe that there are potential economic development opportunities that can be created within the community and local environment, some of which would connect with cultural values. For instance, some FCM members would like to see improvements in the commercial fishing industry and support to build boats and provide training for the younger generations. One community member expressed his willingness to provide training, and described others within the community that can do the same:

I can train young people to fish commercially in Lake Athabasca with big boats. If you have to buy them a big boats or skiffs or whatever it is, teach them how to run a boat and where to fish and how to fight a storm or stay away from a storm when it blows too hard, you might capsize out there. These are the things we need to train our young people with ... And we have some good fishermen here that can train people, such as the Cardinal boys. They're good fishermen ... I don't see any parts of

Canada, any Aboriginal or white are better fishermen than these Métis that we have here. They're professional fishermen, these guys. They're good. They're hard-working men. (FCM TLUO Study\_ID12)

Improvements to the fishing industry will need to coincide with efforts to ensure that industrial activities are not negatively impacting fish stocks.

FCM participants also called for support to develop and implement employment services and job-training programs for youth and other community members. It is hoped that such programs would primarily apply to local work opportunities, but FCM members also expressed their desire to at least see training for the energy sector, if other local options do not materialize. One FCM participant expressed this sentiment by also explaining the need for support to ensure that the youth complete their schooling,

“We already had said any oil companies that need the hand of our Aboriginal people in Fort Chipewyan, especially the Métis, well, they need good training, and encourage the young people to finish off their grades. To finish off their grades and get a little training ... Employ people in the surrounding area ... They should look more to the Aboriginal people for a helping hand in the oil industry if it's going to keep on existing, instead of hauling people from all parts of the world. Train the Aboriginal people. They're good workers ... [but] the Aboriginal elders should be—like in Fort Chipewyan, should be sitting with the young people, talking to them before they get into the workforce.” (FCM TLUO Study\_ID12)

## 8.5. DOCUMENTATION OF CULTURAL HERITAGE

Continued documentation of cultural heritage and development of cultural indicators have been identified by FCM leaders as important strategies to monitor, maintain and strengthen FCM cultural integrity into the future. The strategy would require support for a schedule of interviews and/or additional focus groups and possibly a community-based monitoring program to generate a complementary synthesis of qualitative and quantitative measures for a given set of cultural attributes or practices. Current traditional harvesting is an example of a cultural practice that could be explored, and the practice could be examined with regard to: (i) time and funds required, and distance travelled; (ii) resource availability, quantity and quality; (iii) limitations to adequate harvest; and, (iv) requirements for adequate harvest. This type of documentation would provide critical harvesting metrics to quantify current and potential future impacts to culture and Aboriginal and Treaty rights, and it would inform social-cultural impacts studies (e.g., TLU and CIA) and assessments of environmental effects, enabling researchers to produce richer, more comprehensive, and meaningful assessments.

## 8.6. CUMULATIVE EFFECTS AND LAND-USE PLANNING RESEARCH

Research into cumulative effects and land-use planning is an additional strategy that FCM would like to see supported as part of their long-term vision to minimize adverse effects and strengthen cultural integrity. This strategy would consist of an assessment of: (i) the impacts of past and projected future industrial development on the performance of select ecological, cultural, and socio-economic indicators; and, (ii) the management strategies that could be implemented to meet FCM land-use objectives, such as mitigation of industrial impacts and maintenance of traditional land use in an industrialized landscape. Possible outcomes of the research may include: (i) a protected areas strategy to ensure that community members are able to meaningfully exercise traditional land use practices within reasonable proximity to Fort Chipewyan; and, (ii) an access management plan to maintain FCM access within their traditional homelands and manage increased non-Aboriginal access. Overall, the research would form the basis of further discussions with government and industry on land-use planning, management and mitigation.

## 8.7. FURTHER DATA COLLECTION AND MONITORING

FCM participants placed importance of understanding a youth perspective on culture and how best to mitigate changes. It is recommended that additional focus groups involving FCM youth are conducted to understand their perspectives and cultural impacts they have experienced due to industrial development and specifically the Frontier Project. Additional focus groups could also be important mechanism to continue to monitor or provide CIA updates as culture and industry evolve. It is recommended that these ongoing updates be undertaken at intervals in coordination with FCM leadership to maximize benefit and ensure the needs of FCM are met.

The PAD is a region that is characterized by 11 major habitat types that supports thousands of species of birds, mammals, fish, insects, and invertebrates. This ecological and biophysical diversity contributes to the regions ecological significance on a North American scale.<sup>43</sup> The results of this CIA parallel the FCML 125 MLU/EK study affirming that the PAD is significant culturally<sup>44</sup>, specifically for FCM. Traditional use (e.g., medicine, hunting, trapping), traditional knowledge of the land (e.g., travel, hunting), history (e.g., stories) and identity embedded within the PAD are critical for maintaining FCM culture. Steps to understand monitor and maintain them should be undertaken. It is recommended that specific strategies

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<sup>43</sup> (RSIS 2001): <https://rsis.ramsar.org/RISapp/files/RISrep/CA241RIS.pdf>

<sup>44</sup> Programs such as the Peace-Athabasca Delta Ecological Monitoring Program also recognize the cultural significance of the PAD for Aboriginal Peoples, including FCM.

or programs driven by and for not only FCM, but for all Aboriginal communities that are associated with the PAD.

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## **APPENDIX**

### **LETTER OF INFORMED CONSENT**