Métis Traditional Land Use and Occupancy Study:
Teck Resources Limited – Frontier Oil Sands Mine Project
Limitations and Terms of Use

This report discusses Fort McMurray Métis Local 1935 Land Use and Occupancy (MLUO) in relation to Teck’s Frontier Oil Sands Mine Project. The traditional land use data and traditional knowledge detailed in this report remain the intellectual property of Fort McMurray Métis Local 1935 (ML 1935). There are several caveats associated with the information in this report: not every community member with experience and knowledge of the proposed project site was consulted; study participants were asked to provide land-use information and/or knowledge regarding sites within proximity to two industrial projects during the same interview; and only some of the information provided in interviews was verified through site visits. The main sources of information used in this report were primary interviews conducted for this project at which project maps were shown. Additional sources of information cited in this report include: interviews previously conducted for project-specific land use studies archived in the Fort McMurray Métis Local 1935 Land Use Database; interviews conducted as part of the Mark of the Métis Historical Project; and files containing Historic Trap Line Maps from the Provincial Archives of Alberta. More information on sources and on project research methodology is included in this report. The results and recommendations included in this report are intended for use by Teck Resources Ltd and its affiliated consultants or agents to inform Environmental Impact Assessment and mitigation for the Frontier Oil Sands Mine Project. The results and recommendations outlined in this report are thus specific to the Teck Resources Ltd Frontier Mine Project and are not intended for use by any other parties or for any other purposes. The report is not intended for use in any assessment of other existing or future industrial projects in the Traditional Territory of the Fort McMurray Métis Community. Any use, reliance or decision made by third parties on the basis of information contained in this report is not condoned by the authors and remains the sole responsibility of such third parties. This report was composed in order to protect the Aboriginal rights and interests of the Métis community.
Acknowledgements

Fort McMurray Métis Local 1935 would like to thank our Community Members for so graciously sharing traditional land use information over the years. Your stories, insights and experiences are priceless components of our collective heritage. By documenting your knowledge, we hope to preserve the integrity of our traditional territory so that future generations can continue to enjoy the culture and practice of Métis Traditional Land Use.

The collection, indexation and storage of traditional land use and traditional knowledge data is a complex process, which requires the ongoing effort and support of many people including the Fort McMurray Métis Local Board of Directors, General Manager Kyle Harrietha, Industry Relations and Business Development Administrator Salem Al-Ahmad, Heritage and Traditional Knowledge Administrator Carmen Wells, Traditional Lands Specialist and Trapper Liaison David Waniandy, and the rest of the Local Staff.

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Text and maps by Vinay Rajdev and Dermot O’Connor Willow Springs Strategic Solutions Inc.

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Data Storage: Kwusen Media Community Knowledge Keeper
Executive Summary

Métis people in the Athabasca River Basin continue to practice traditional harvesting alongside commercial and subsistence trapping as they have for centuries. While occupancy patterns on the land have shifted in the last forty years as Métis families have become increasingly urbanized, traditional land use continues. Subsistence harvesting practices still nourish the minds, bodies and spirits of families even as Métis workers and entrepreneurs have become increasingly integrated with the region’s extractive resource economy.

In order to protect the community’s unique way of life, economic interests and cultural integrity, the Métis of Northeastern Alberta have built a thriving social movement represented by Local organizations that operate under the umbrella of the Métis Nation of Alberta (MNA). Fort McMurray Métis Local 1935 (ML 1935) is the largest Metis Local in the region and represents the Métis People of Fort McMurray and area.

Since the inception of its *Mark of the Metis* Oral History Project in 2007, ML 1935 has been engaged in ongoing efforts to collect members’ oral histories, document and map traditional land use patterns and practices, identify the impacts of local industrialization on the Metis community, and collect archival and historical information about the Metis in Northeastern Alberta. Much of the information collected through this process has been digitized, indexed and archived using GIS and web-based software. The primary interviews conducted with community members in regards to the Frontier Mine Project were coded and added to this database for use in the writing of this report. The Land Use and Occupancy Data presented in this report is the intellectual property of the Fort McMurray Métis Local 1935.

In March 2012, the Energy Resources Conservation Board released a notice of application for the Teck Resources Ltd (Teck) Frontier Mine Project (Frontier Project). The application described plans to construct, operate, and reclaim a new oil sands mine and processing plant, located approximately 110km north of Fort McMurray, Alberta. The Frontier Oil Sands Mine Project would include mine pits and associated earth structures, ore preparation plants, bitumen extraction plants, a bitumen froth treatment plant, tailings preparation and management facilities, cogeneration and heat integration facilities, steam and hot water generation facilities, support utilities, off-sites and infrastructure, and environmental management facilities. Teck’s leases for the Frontier Project main development area (MDA) would be located in Townships 100, 101, and 102, Range 11, West of
the 4th Meridian, and the south development area (SDA) would be located in Township 98, Range 11, West of the 4th Meridian. The Frontier Project would have a disturbance area of 29,335 hectares, resulting from four development phases. Start-up of Phase 1 would occur in 2021 and by 2030 all four phases would be operational, producing about 44,100 cubic metres of partially de-asphalted bitumen per calendar day. End-of-mine life would occur in 2054 for the MDA and 2057 for the SDA.

Considering the extent of its members’ traditional land use in the Fort McMurray area and the Athabasca River basin, ML 1935 requested that the proponent fund a Project-Specific Traditional Land Use (TLU) Study. Nine primary interviews with community members were conducted over the summer of 2014. At each interview, participants were shown maps of the Teck Frontier Project Footprint and were asked a series of open ended questions about land use, harvesting and site-specific environmental knowledge.

Based on the results of this study, ML 1935 was able to identify some concerns about potential impacts of the project on its members’ rights to hunt, fish, trap, and harvest plants. Cross-referencing existing ML 1935 land use data with existing TLU data belonging to ML 1935 members, as well as the results of the Project-Specific TLU Study, revealed that the project development area intersected directly or indirectly with 80 land use values. These potential conflicts with Aboriginal land use include impacts to wildlife, traditional trails, cabins and cultural/spiritual sites, hunting and trapping, fishing and berry harvesting. Interview and archived data also revealed project-specific concerns about environmental, socioeconomic, cultural, and consultation process-related issues.

In addition to the primary interviews with community members, harvesters, trappers and elders conducted specifically for this Frontier Project, additional sources of land use and occupancy data and traditional environmental knowledge cited in this report include: interviews archived in the Fort McMurray Métis Local 1935 Land Use Database (Community Knowledge Keeper); interviews conducted as part of the Mark of the Métis Historical Project; and files containing Historic Trap Line Maps from the Provincial Archives of Alberta. Land use and historical map data relevant to the Teck site is discussed in greater detail in the body of the report; however, the key findings and concerns are summarized here in the executive summary.
Teck Resources Frontier Project-Specific Concerns – Local Study Area

The first set of concerns relate to impacts on wildlife within the Traditional Land Use Study Area Delimited by Teck in its 2011 Environmental Impact Assessment.¹

The Teck Frontier Project leases are in an area known by Métis harvesters to be habitat for large animals, including moose, bison, caribou, deer, elk and black bear (TECTLU2014-HLA16-23; TECTLU2014-HLA27-24; MLU2013-23 HLA15; MLU2013-02 HLA26; MLU2013-26 HLA18).

The Frontier Project Leases are known by Métis harvesters as habitat for fur-bearers, including beavers, wolf, muskrat, squirrels and rabbit (MLU2013-02 HFB28; NRBS03 HLA13-208).

The Athabasca River is adjacent to the Frontier Project Development Area and is said by study participants to be important habitat for Arctic Grayling, Walleye, Northern Pike, Cod (lingcod or burbot) and White Sucker which are all fished by ML 1935 members for subsistence purposes (MLU2013-05 F19; MotM; Fishing Areas Map File).

The Frontier Project is adjacent to the known Red Earth Caribou Range on the west side of the project area and Richardson Caribou Range on the east side of the project area. The project puts this threatened species at risk of habitat destruction, predation, and disruption of connectivity between the two populations on either side of the Athabasca River.

ML 1935 is concerned that the Frontier Project would adversely impact heritage food species such as moose, bison and fur-bearers upon which Métis community members rely for subsistence.

The second set of LSA concerns relates to Métis community trapping on RFMA 1275 within the LSA; and RFMAs 1743, 2331, 1661, 2939 within the RSA; along with RFMAs 2890, 2908 and 2901 to which access would be disrupted by project construction (although they are outside the project LSA they are sites to which access through the LSA will be disrupted).

¹ Teck Resources Ltd, 2011, Frontier Oil Sands Mine Project Integrated Application, Volume 8 People and Places, Figure 6-1, Traditional Land Use LSA and RFMAs.
Historic Trap Lines in the project area belonged to Métis families. Considering the historic and current connections of the Métis community to these important harvesting areas, they are thus considered to be places of cultural importance as they are critical sites for inter-generational knowledge transfer about harvesting, subsistence living, trapping and hunting.

Metis community members currently hold RFMAs 2901 and 1743. These traplines encompass areas that are important for the practice of Aboriginal rights and historic continuity with the fur trade and are therefore of central importance to Metis identity and culture. While some of these sites may not directly intersect with the project, access to these RFMAs may be impeded by project construction.

The RFMAs in and around the project face an uncertain future if the Frontier Mine construction is approved since trapping and related Métis cultural practices in the surrounding areas could become unviable in a short time. Project-related habitat destruction and disruption of fur-bearing populations will drive out animals. ML 1935 leadership will fully support Métis community members and trappers who are impacted by development of this project and expect that appropriate compensation and mitigation measures will be discussed with the participation of the RFMA holders, legal counsel, Métis community representatives, family and junior partners.

Additional traffic from project personnel, utility corridors for power lines, water supply pipes from the Athabasca River and plant infrastructure into the Frontier Project site will enable greater ease of access for recreational trail users which could lead to competition and potential conflicts with Métis land users.

A third set of concerns about the project LSA relates to Metis community occupancy and historic sites:

Metis families have historically lived within the Frontier mine project area and several cabin remains attest to this. Fort McMurray Metis Local members continue to hunt, fish and camp along the Athabasca River in and around the Frontier Mine Leases.

Considering the concentration of traditional trapping and subsistence harvesting activities and frequency of use by community members, the connection of the Métis community to these areas and the presence of Métis habitation sites, the
Frontier Project threatens to infringe upon the Aboriginal rights of the Métis community.

*The fourth set of concerns about the Frontier LSA relates to Environment and Biodiversity:*  

The Frontier Project will require additional site access-roads, utility corridors for power lines, water supply pipes from Athabasca River and plant infrastructure. This site infrastructure will destroy and/or fragment wildlife habitats in and around the project site.

Métis Environmental Knowledge (MEK) suggests that the retention of water in muskegs depends on tree cover. Fragmentation of forests and deforestation in wetlands leads to increased drainage and eventual loss of muskeg.

Experience working with oil companies has led some community members to conclude that in the past environmental contamination and spills often went unreported, although this is changing now that there is more public attention on the environmental impacts of oil sands projects.

A strong commitment to reclamation planning prior to construction will ensure more effective long-term reclamation practices. This may involve more intensive efforts to document and preserve native plant species, hydrology and forest/tree cover. Local land-users are willing to provide input into this process if invited. One example of how Métis land users can assist is in the cataloguing of rare and medicinal plant species.

Fragmentation of boreal forest habitat favoured by caribou that feed only on lichen and moss put this threatened species at further risk of predation from wolves, which take advantage of the longer sight lines and deeper snow in open clearings. Habitat fragmentation requires remedy and measures must be taken in cooperation with Métis knowledge holders to dissuade predation of caribou and anthropogenic disturbance around the Frontier Project areas.

*The fifth set of project-specific LSA refers to Socioeconomic and Cultural Impacts:*  

The Project Development Area represents loss of hunting terrain which impedes youth from getting out on the land and hampers intergenerational knowledge transfer and cultural learning.

As each mining project has a camp for personnel, Frontier Project’s camp facilities will mean more people in the area, additional camp infrastructure, traffic and waste.
Frontier-project workers could benefit from programs to raise awareness about local Métis history, culture and the requirements of subsistence land users.

Local workers, particularly Aboriginal workers, are not provided the same employment incentives and salary benefits such as living allowances and travel expenses that outside or migrant workers are offered.

Population increases in Fort McMurray and the prevalence of temporary workers have created security risks to the persons and property of land users. Trucks left near roads while hunters are in the bush are often vandalized or targeted by thieves. Trap Line cabins have been vandalized and property stolen.

*The sixth set of LSA concerns relates to the Consultation Process:*

Teck’s stakeholder and Aboriginal community consultation efforts raised several concerns. There is a need for additional plain language and verbal explanations for site-related technical concepts, particularly in relation to the source of water intakes and tailings pond locations and risk of project-impacts to surface water including the Athabasca River.

In regards to Trapper Relations, a stronger relationship between trappers and company representatives would be encouraged by regular meetings and face-to-face interaction rather than through impersonal written notifications using legal and technical jargon.

Furthermore, arranging for regular meetings, which would include trappers, harvesters and company representatives, would contribute additional insight and possibilities for impact mitigation.

Métis trappers are both commercial entrepreneurs and Aboriginal subsistence harvesters. Existing trapper compensation guidelines based on individual recompense are therefore inadequate to compensate the Métis individuals and community for infringement of Aboriginal harvesting practices and disruption of sites of individual and community importance.
The Frontier Project and Regional Environmental, Socioeconomic and Policy Considerations

The first set of project concerns at the regional level refers to the project’s impacts on the Environment and Biodiversity in the Fort McMurray Region:

Métis study participants note that the Frontier Project will contribute additional sulphur and carbon emissions as well as vehicle and machinery exhaust, dust and H2S gas.

Study participants signal that with the present pace of development in Alberta, commitment to reclamation is often neglected and Alberta Environment and Sustainable Resource Development (AESRD) is not providing sufficient oversight of oil companies, which sometimes take advantage and practice limited reclamation. The Métis community encourages Teck to commit to reclamation planning as part and parcel of the industrial cycle of mining activity. Effective reclamation begins before construction.

Métis environmental knowledge holders continue to observe caribou population decline in once-viable habitats as the pace of industrialization accelerates and habitat fragmentation deepens. Existing caribou habitat protection guidelines and Alberta Government standards for habitat protection have been inadequate in halting caribou population decline. Métis community members are looking for industry partners who will commit to a comprehensive, sustainable and effective caribou protection strategy.

The second set of regional concerns involves Socioeconomic and Cultural Impacts:

While Métis community members are not opposed to industrialization and indeed many have benefitted from employment in the oil and gas industry, the pace of development is itself a concern. Industrial development reduces the amount of viable wilderness space available for harvesting and creates time constraints on harvesters, reducing opportunities for intergenerational transfer of knowledge about traditional lifestyles and subsistence harvesting practices. Community members encourage proponents to pursue environmentally and socially responsible development in consideration of the needs and circumstances of the local Métis population, workforce and business community.

The Frontier Project will bring in additional workers to the area from outside the region, requiring camp accommodation and/or placing additional stress on the local real-estate and rental markets and on public infrastructure including hospitals, roads and recreational facilities.
The Frontier Project will contribute to regional and cumulative impacts to traffic and air pollution creating dangers to local land users.

In sum, Industrialization creates opportunities for youth employment but it also entails a loss of space and time to devote to traditional harvesting, which disrupts the transfer of cultural knowledge, wilderness survival and environmental knowledge. This contributes to the cumulative and temporal erosion of Métis land use and cultural knowledge transfer.

The third set of RSA concerns is in regards to Consultation and Norms of Community Engagement:

Métis community members have stated in interviews that proponents often ask the public and community members to raise concerns, but are not committed to responding to issues that are raised.

Some community members have expressed resignation that no matter what concerns they raise, the proponent will ignore them since companies are determined to do what they want no matter what, making consultation insincere.

Two ways that the proponent can demonstrate respect and commitment to dialogue with the community are to work to ensure access to project areas for local land users where safety considerations permit and involve community members in reclamation planning.

The Frontier Project and the Contribution to Cumulative Impacts – Cultural, Environmental, Socio-Economic

The following observations refer to the potential contribution of the Frontier Project to cumulative environmental and socioeconomic impacts of a long-term nature:

Air and water quality, human health, wildlife habitat quality, biodiversity and fish habitat quality require ongoing monitoring and multi-stakeholder and multi-sectorial cooperation. This extends to reclamation of abandoned sites. Industry, government, environmental groups and community organizations need to cooperate to provide oversight and hold proponents accountable for environmental quality and impact mitigation prior to commencement, during operations and after the project’s productive lifespan ends.
Socioeconomic and cultural impacts and benefits suggest uneven development across generational and cultural divides. While industrial development creates jobs and injects money into the region, it also impacts traditional land use by diminishing crown land available to harvesters and driving people out of areas they once hunted, fished and trapped. Industrialization favours the young, educated and mobile while imposing costs on the elderly and retired population, particularly through housing and rental prices.

Regulation and consultation in the long-term requires transparent, arms-length and multi-sector monitoring. Transparency and the public interest demand that monitoring bodies are at an arms-length from industry. Members of the general public, academics, environmental groups, scientists and Aboriginal groups must have equal opportunities to engage with government and industry to monitor and mitigate the impacts of industrialization.

In order to balance the potentially conflicting interests of Aboriginal harvesters, recreational land users and industrial land users, ML 1935 insists on ongoing communication, consultation and cooperation between multiple land-use interests. This raises the importance of ongoing consultation.

ML 1935 intends to use the information provided in this report as a basis from which to negotiate project impact mitigation measures with Teck on clear, evidence-based and mutually agreeable terms.
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1. Introduction and Rationale

The Métis emerged as a distinct people following contact between Europeans and Indigenous North Americans in the westward expansion of the fur trade. Traditional fishing, hunting and plant harvesting have sustained Métis families across many generations. Subsistence harvesting has seen the Métis through changing patterns of employment in a variety of industries from the fur trade, to agriculture, to the modern industrial economy. Faced with historic pressures from the westward advance of settlers on the plains to the south by the mid-nineteenth century, Métis communities moved further westward and northward. The sustenance of Métis families, settlements and villages came to rely increasingly on connections to the boreal forest ecosystem with its furs, lumber, food plants and big game. Traditional harvesting is more than a form of economic subsistence; picking berries, hunting, fishing and being on the land are integral to Métis culture and identity. Just as many Métis trappers continue to ply their centuries-old trade despite increased government regulation, conflicting and competing land uses, and declining economic viability, Métis hunters, fishermen and berry-pickers persist in their efforts to harvest in the traditional way. Today the traditional geographic relationship between Métis civilization and the boreal forest ecosystem is being transformed as the industrial landscape of the Athabasca Oil Sands expands. This transformation impedes the ability of Métis people to practice traditional harvesting and by doing so threatens the foundations of Métis culture and identity.

Fort McMurray Métis Local 1935 (ML 1935) is the community-based, not-for-profit organization, which represents the interests of Métis people living in Fort McMurray. ML 1935 is affiliated with the Métis Nation of Alberta (MNA). As active users of the land, Métis people have intimate knowledge of the local ecosystem - rivers, water-bodies and wildlife populations - and are eager to contribute this knowledge to address and prevent environmental impacts of industrial projects. Furthermore, the pace of industrialization has altered the local landscape and broader ecosystem upon which the practice of Aboriginal harvesting rights depends. ML 1935 members are engaged in a process to document their knowledge and traditional use of land within specific project sites in order to protect the community’s heritage, territory, culture, traditional resources and historic resources.

In March 2012, the Energy Resources Conservation Board released a notice of application for the Teck Resources Ltd (Teck) Frontier Mine Project (Frontier Project). The application described plans to construct, operate, and reclaim a new oil sands mine and processing plant, located approximately 110km north of Fort McMurray, Alberta. The Frontier Oil Sands Mine Project (Frontier Project) would include mine pits and associated earth structures, ore preparation plants, bitumen extraction plants, a bitumen froth treatment plant, tailings preparation and management facilities, cogeneration and heat integration facilities, steam and hot water generation facilities, support utilities, off-sites and infrastructure, and environmental management facilities, river water intake, a fish habitat compensation lake, roads, airfield and

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2 Patrick C. Douaud. 2007. “Genesis” in Patrick C. Douaud, ed., The Western Métis – Profile of a People, University of Regina, Great Plains Research Centre.
camp. Teck’s leases for the Frontier Project main development area (MDA) would be located in Townships 100, 101, and 102, Range 11, West of the 4th Meridian, and the south development area (SDA) would be located in Township 98, Range 11, West of the 4th Meridian. The Frontier Project would have a disturbance area of 29,335 hectares, resulting from four development phases. Start-up of Phase 1 would occur in 2021 and by 2030 all four phases would be operational. Start-up of Phase 1 would occur in 2021 and by 2030 all four phases would be operational, producing about 44,100 cubic metres of partially de-asphalted bitumen per calendar day. End-of-mine life would occur in 2054 for the MDA and 2057 for the SDA.

Considering the extent of its traditional land use in the Fort McMurray area, ML 1935 is concerned about the impacts of the Teck Frontier project on its members’ Aboriginal rights. The Local was interested in identifying the patterns of members’ land use and occupancy in relation to the Teck Frontier Project Development Area.

The Teck Frontier Oil Sands Mine Project Specific Métis Land Use and Occupancy Study was guided by the following questions: what are the general patterns of land use and occupancy in the proposed project area? What are the potential impacts of this project on Métis land use and occupancy and on the Métis community’s heritage more generally? How will this project contribute to cumulative environmental and cultural impacts?

Primary interviews with community members provide the main source of information for this study. In addition to these nine project-specific interviews with ML 1935 members, the sources of land use and occupancy data and traditional environmental knowledge include: interviews from past-project specific land use studies archived in the Fort McMurray Métis Local 1935 Land Use Database (Community Knowledge Keeper); interviews conducted as part of the Mark of the Métis Historical Project; and files containing Historic Trap Line Maps from the Provincial Archives of Alberta. The inherent paradox in project-specific land-use studies is that they document sites of Métis land use at which harvesting and intergenerational knowledge transfer will be disrupted as industrial projects proceed. Thus project-specific environmental impact assessments provide only a fragmented view of Métis land use. More general and regional Métis land use and occupancy information is also reviewed briefly in this report as a summary of the Mark of the Métis study, which was released in 2012 and features information from 105 contributors. The layout of the remainder of this report is as follows. It begins with a brief review of the Consultation and Traditional Land Use sections of the Teck Frontier Environmental Impact Assessment (EIA) report. Following this brief review, the details of the ML 1935 land use and occupancy study are presented with information on research methodology and data sources. The results of the study are discussed by category of land use including wildlife, hunting and trapping (subsistence harvesting/snaring and commercial trapping), traditional trails, cabins and cultural/spiritual sites, fishing, and medicinal plant and berry harvesting. Site-specific and non-site specific concerns are discussed as well as contributions of the project to regional and cultural cumulative impacts. Specific mitigation measures are documented here; however, it is understood that the information in this report will serve as a basis for ongoing negotiation on potential project impact mitigation between Teck and Métis Local representatives.
2. Review of Teck’s EIA Report: Traditional Land Use & Consultation

Teck submitted its EIA report to the regulator (then ERCB, now AER) dated September 2011. Volume 2, Section 13 discusses the baseline Traditional Land Use. Most of the information used for the TLU baseline assessment comes from a literature review of publicly available information. Volume 8, Section 6 discusses traditional land use for Aboriginal communities within the Frontier LSA and RSA and potential impacts to this land use.

Prior to submitting the EIA report, Teck did not provide funding to ML 1935 to conduct a project specific Traditional Land Use study. The only communities from which Teck gathered TLU information were Fort McKay First Nation, Athabasca Chipewyan First Nation, Mikisew Cree First Nation, Fort McKay Métis Local and Fort Chipewyan Métis Local. While the Fort McKay Metis Community and the Fort Chipewyan Metis Local were engaged for consultation over project specific impacts to traditional land use by Teck prior to submission of the EIA, including provision of funds for TLU studies, ML 1935 was not provided with the same opportunities or level of engagement. When Teck did make reference to ML 1935 land use in the Baseline Studies of Traditional Land Use it referred to interviews from the Mark of the Métis project. However, this was prior to the release of the Mark of the Métis Historical Atlas that was published in 2012. The information on Fort McMurray Metis land use included in the EIA and TLU baseline report is therefore incomplete and without project specific information on ML 1935 land use in the project area, the assessment of the project’s impact on Aboriginal rights and Metis land use must be considered invalid. Furthermore, Teck inadequately consulted ML 1935 over its land use in the project area prior to submission of the EIA, despite its engagement with other Métis Locals.

The omission of Fort McMurray Metis land use information in the EIA and the lack of adequate consultation with the ML 1935 prior to submission of the EIA create risks of invalid or erroneous impact assessment. For example, in the Teck Frontier EIA report, it states that: “Fishing areas were not specifically identified in the Project area (see Volume 5, Section 5). Therefore, traditional fishing is not expected to be affected by the Project.” Considering that in this quote the proponent does not specify whether it refers to the project LSA or RSA, nor whether this includes the Athabasca River; the statement is highly dubious. Had Teck done a project-specific TLU study with ML 1935 prior to the EIA, and had this information been included among the baseline TLU studies, it would be clear that fishing along the Athabasca in proximity to the LSA

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5 Teck Resources Limited. 2011. Frontier Oil Sands Mine Project, Integrated Application. Volume 8: People and Places; Section 6.5.1.1: Traditional Land Use – Data Sources, Page 6-16
7 Teck Resources Limited. 2011. Frontier Oil Sands Mine Project, Integrated Application. Volume 2: Baseline Studies; Section 13.3.2.5: Traditional Land Use – Métis Communities of Fort Chipewyan, Fort McKay and Fort McMurray, Page 13-32
9 Teck Resources Limited. 2011. Frontier Oil Sands Mine Project, Integrated Application. Volume 8: People and Places; Section 6.5.4.3: Traditional Land Use – Effects Analysis – Maximum Build-out Snapshot (2057) - Fishing, Page 6-21
constitutes fishing within the Project Study area, as does fishing around the Athabasca water intake. Metis harvesters, as this study reveals, fish all along the Athabasca River for a variety of species (see section on Fishing below). This is one example of how the omission of Metis traditional use of the project areas may invalidate the EIA report’s conclusions about project impacts to Aboriginal and traditional land uses.

Another example of how the omission of Metis land use data reduces the validity of the impact assessment also relates to fishing. Teck failed to mention how the construction of the regional road access to the Frontier Development Area could potentially impact fish and fish habitat. Option 4 would be crossing numerous rivers from the Horizon project to the Frontier Project. Option 5 and 6 would cross the Athabasca River to the Frontier Project Development Area; thus, potentially affecting fish and fish habitat that the Métis use for subsistence purposes.

Teck’s assessment of potential impacts to traditional land use within the RSA only focused on how the Frontier Project would affect the First Nations but did not consider impacts to Fort McMurray Metis harvesters. However, as the following sections of this report will demonstrate and as the results of the ML 1935 Teck Frontier Project-Specific TLU Study clearly reveal, members of ML 1935 are heavy land users within the LSA and RSA. ML 1935 land use in the project areas includes hunting, trapping (especially on RFMA 1743, 1275 and access routes to 2901), fishing and berry picking. This information was not included in the EIA report. Nevertheless, as project assessment is now in the Supplemental Information Request and Review Stage, there is still time for information on Metis land use to be incorporated in project impact assessment. The identification of Metis land use in the project areas can still inform project planning, impact avoidance, mitigation and benefit agreements through the SIR and hearing processes.

### 3. Métis Land Use and Occupancy Data and Study Methodology

Following the submission of its application to the regulator and during the period of public review, Teck agreed to provide funding to ML 1935 to conduct a project-specific land use and occupancy study. In the spring and summer of 2014, nine interviews were conducted with community members. These members were identified for participation by ML 1935 leadership and staff based on patterns of land use, knowledge of the project site, ancestral connections to the project leases, habitation or dwelling location and/or the exercise of licensed trapping or harvesting in the project areas. Information from these interviews is cited in this report as TECTLU2014-(filename).

In addition to the project-specific interviews, a variety of additional land use data sources were consulted. Since the inception of its Mark of the Metis Oral History Project in 2007, ML 1935 has been engaged in ongoing efforts to collect members’ oral histories, document and map traditional land use patterns and practices, identify the impacts of local industrialization on the Métis community and collect archival and historical information about the Métis in Northeastern

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Alberta. Fort McMurray Métis Local 1935 has indexed and stored much of its Land Use and Occupancy data in a database known as *Community Knowledge Keeper.*\(^{12}\) For each land use interview conducted with members, the full transcript, audio recording, map and coded set of notes can be uploaded, indexed, stored and searched. This dynamic, full-text, searchable and interactive land use database ensures that land use information is stored in a safe, accessible and organized manner. At present, ML 1935’s Community Knowledge Keeper contains interviews conducted for past Project-Specific Land Use Studies in the Fort McMurray Métis Local 1935 *Community Knowledge Keeper* Database, interviews conducted as part of the *Mark of the Métis* Historical Project, files containing maps of Historic Trap Lines circa 1957 from the Provincial Archives of Alberta,\(^ {13}\) and interviews from the 1994 Northern River Basin Study. Major land use studies included in the Database are:

- **The *Mark of the Métis* study** consisted of interviews with 105 members of the Métis Local 1935, which were held between 2007 and 2011. Information from this source is cited as follows: “MotM (filename)” for the *Mark of the Métis* Study;

- **A Project Specific Metis Land Use and Occupancy Study** pertaining to five industrial projects proposed by the same proponent involving interviews with 28 community members was performed in the Summer of 2013. Information from this study is cited as “MLU2013-(filename)”;

- **A traditional land use study** commissioned by five separate industrial-project proponents was conducted in the Fall of 2013. In all, 19 people including elders, trappers, hunters, commercial fishermen and food and medicinal plant harvesters were interviewed about their land use and knowledge of several in situ operation sites between September and December 2013. This project specific study is cited as JMLU2013-(filename).

- **Archival information** consists primarily of digitized maps from “Historic Trap Line Map File No, GR1990.0377 PAA” obtained from the Provincial Archives of Alberta.

- **Two industrial Project-Specific Métis Land Use and Occupancy studies** were conducted in Summer 2014, involving interviews with 15 community members to date. Again, the Teck Frontier Project was not shown during these interviews. Information cited from these project specific studies are cited as AOCTLU2014-(filename) and VCITLU2014-(filename).

- **A traditional knowledge and traditional land use study which consisted of 57 interviews** was conducted in 1994 for the Northern River Basin Study. Information from this study is cited as “NRBS-(filename).

In order to collect, document and archive its traditional land use information, ML 1935 has taken the following steps. Once project proponents agree to participate in a traditional land use study, consultants familiar with Traditional Land Use Study Methodology are hired to support the


\(^{13}\) Provincial Archives of Alberta, Historic Trap Line Maps, File No. GR1990.0377
community process. Study participants are typically identified by ML 1935 board members and staff members who then contact participants and arrange interviews.

At each interview, participants are informed of the purpose of the interview and the end to which the information will be used, including receiving information on the addition of the information to a land use database. Once informed consent is provided by the participant the interview commences. One researcher asks the majority of the questions while a second researcher codes land use on Google Earth and keeps detailed notes about each coded item. Each interview is audio recorded and ranges from 60 to 120 minutes in length. The audio-recording of each interview is always transcribed. In order to organize the Métis LUOS information provided by the study participants, the project team employs a set of map codes for various land-use categories, including various types of hunting, plant harvesting, site-specific occupations or activities, trails, transport routes and animal habitats. A complete map code list is provided in the appendix.

As information is given throughout the interview by the participants, interviewers record a chronological series of numbers alongside each coded item in order to match points on Google Earth maps to the written notes taken by the project team and to the audio-transcript. For example, F01, B02, F03, H04 would refer to a discussion around fishing, berry picking, fishing at another location, hunting respectively and so on. Each note can be easily identified with the map point to which it refers or its time within the interview transcript by the code and the numerical sequence. Map entries could be points, lines or polygons of various sizes. If the interview is conducted in the context of a project-specific land use study, shapefiles and/or maps for the industrial project are presented to interview participants. Participants are invited to provide site-specific input or environmental concerns after each individual’s general pattern of land use and occupancy and site-specific land use values had been collected.

Following the interviews, all audio recordings are transcribed and the text is returned to the participants for verification. In addition, each interview generates a map biography in Google Earth KML format, which is provided to each participant on a DVD with instructions on how to view the map. Geographic coordinates, transcripts and interview notes are compiled in spreadsheets and are used to provide additional detail and accuracy of map biography points in Google Earth. Each map point, identified in the interview and coded according to the above guidelines, is tied to the text transcript of the interview. Once project data entry and digitization is completed, project land-use data is uploaded to the Community Knowledge Keeper.

The use of GIS and web-based land use software ensures that past land use interviews can be easily accessed to provide additional data and information for project-specific studies as the need arises with ongoing industrial development. Digitizing land use information and map biographies ensures that the information collected in the past continues to serve the ongoing efforts of the Métis organization to protect community land use values. As many land use and occupancy study participants are elders, receiving informed consent to archive map biographies and land-use interviews has become an important part of protecting the collective memory and knowledge

of a community’s land users. Should knowledgeable land users pass away, the storage of land use interview data and map biographies ensures that a digital trace remains of the footprint these respected members left on the land.

For the Frontier Mine TLU study, nine primary interviews were conducted with community members, coded and uploaded to the Community Knowledge Keeper database. Along with the existing interviews archived in the online database, the authors were able to draw on land use data from more than 200 interviews to produce this report.

4. Métis Land Use and Occupancy Study Results – The Frontier Project

Teck is proposing to develop its Frontier Project on its leases located approximately 110km north of Fort McMurray, Alberta. Teck’s leases for the Frontier Project main development area (MDA) would be located in Townships 100, 101, and 102, Range 11, West of the 4th Meridian, and the south development area (SDA) would be located in Township 98, Range 11, West of the 4th Meridian shown in Figure 1. Potential conflicts arise when recorded land use value data coincides with the geographic footprint of the project. Conflicts can be defined as irreconcilable differences between the land use values and the project site, whereby the traditional land use value or critical wildlife value in question would be severely compromised or destroyed should the project go ahead as planned. Potential conflicts require ongoing discussion and further consultation while recognized conflicts usually require impact mitigation. The Frontier Project was cross-referenced with existing ML 1935 Land Use and Occupancy Data stored in Community Knowledge Keeper.

Cross-referencing existing ML 1935 land use data with the Teck Frontier Project TLU Local Study Area (as defined in the 2011 EIA report)\(^{15}\) revealed 80 potential land use value conflicts. These ML 1935 land use values which overlap with the Teck TLU LSA include wildlife habitats (9), traditional trails, cabins and cultural/spiritual sites (40), hunting and trapping (23), fishing (2) and berry harvesting (3). Based on study participants’ environmental knowledge of the site and of mining-related concerns, a series of site-specific environmental, socioeconomic, cultural, and consultation process-related concerns were also raised. Each of these categories and concerns is discussed in detail below.

\(^{15}\) Teck Resources Ltd, 2011, Frontier Oil Sands Mine Project Integrated Application, Volume 8 People and Places, Figure 6-1, Traditional Land Use LSA and RFMAs.
Figure 1. The Frontier Oil Sands Mine Project Conceptual Development Area and TLU LSA

Legend

- Frontier Oil Sands Mine Project

Scale as shown
Base Map from Google Earth
5.1 Wildlife

Land Use and Occupancy data for the Frontier Mine Project revealed potential land use conflicts with wildlife habitats. Figure 2 depicts the critical wildlife values which intersect with the Frontier project. Light blue polygons depict wildlife habitats described by interview participants while the green polygons delineate caribou population ranges available from Alberta Environment and Sustainable Resource Development.

According to land use interviews with active trappers and hunters, the project area is habitat for large animals, including caribou, moose and bison (TECTLU2014-HLA16-23; TECTLU2014-HLA27-24). Metis hunters are well aware of a distinct bison herd around Ronald and Diana Lakes and north of the Frontier Project Development Area. Other study participants have identified moose, deer, elk and black bear habitats in and around the Frontier Project Development Area (MLU2013-23 HLA15; MLU2013-02 HLA 26; MLU2013-26 HLA18). In addition, the Frontier Project area is habitat for fur-bearers including beavers, wolf, muskrat, squirrels and rabbit (MLU2013-02 HFB28; NRBS03 HLA13-208). Frontier project-related infrastructure, including roads, utility corridors, power line right of ways, and water supply pipes fragment the boreal forest ecosystem upon which these animals depend. Industrial disturbance drives animals out of the area. Disruption of wildlife and wildlife habitat will interfere with Aboriginal harvesting activities.

The Athabasca River, which flows adjacent to the Frontier project area, is habitat for Arctic Grayling, Walleye, Northern Pike, Cod (ling cod or burbot) and White Sucker (MotM, Fishing Areas Map File). Pollution, groundwater contamination and watershed disturbances could adversely impact water-flow and quality in the Athabasca river watershed, putting aquatic resources and fish habitat at risk of contamination and creating risks to fish and people who feed on Athabasca fish.

The Teck Frontier Project is adjacent to the known Red Earth Caribou Range on the west side of the project area and Richardson Caribou Range on the east side of the project area. The Frontier project will fragment the habitat of this threatened species, putting the population at risk of predation, mortality and creating barriers between the two populations on either side of the Athabasca River.16

Considering the concentration of fur-bearers, large animals and fish species in the project area and the year-round presence of wildlife, the Frontier Project Development Area is an important wildlife habitat for a variety of species upon which Aboriginal harvesters depend for subsistence purposes. Project development will therefore impact wildlife and the practice of aboriginal harvesting rights which depend upon the wildlife.

Figure 2. Wildlife in the Frontier Oil Sands TLU LSA and RSA

Legend
- Caribou Range
- Critical Wildlife Values
- Frontier Oil Sands Mine Project

Scale as shown
Base Map from Google Earth
Despite the location of the project between the Red Earth and Richardson Caribou ranges, the Teck EIA report indicated that woodland caribou was not assessed because the ranges were outside the Local Study Area (LSA). However Métis land users have observed caribou movement regularly within the Frontier Project Development Area. The Woodland Caribou is a flagship species for boreal forest health and biodiversity since caribou require an extensive range of undisturbed territory to be viable. The presence of caribou is therefore an indicator of a viable forest. When the caribou population is threatened by habitat destruction, it is a warning sign of the overall danger to the boreal forest ecosystem.

Community members and study participants familiar with caribou and mining projects noted that any disturbances in the boreal forest habitat favoured by caribou which feed only on lichen and moss put the threatened species at further risk of predation from wolves who take advantage of the longer sight lines and deeper snow in open clearings. Habitat fragmentation requires remedy and measures must be taken in cooperation with Métis knowledge holders to dissuade wolf predation of caribou at the Frontier Project site and in surrounding areas including access roads and related right of ways (JMLU2013-09 OC80 4:37).

Métis environmental knowledge holders continue to observe caribou population decline in once-viable habitats as the pace of industrialization accelerates and habitat fragmentation deepens. They point out that existing caribou habitat protection guidelines and Alberta Government standards for habitat protection are not adequate. A more active and aggressive Caribou habitat protection plan, which includes Caribou population recovery efforts, needs to be adopted immediately in order to stave off local caribou extirpation. Métis land users and environmental stewards are eager to participate with project proponents and their environmental teams by sharing local knowledge of caribou habitat to promote landscape level habitat protection and ethical/caribou-sustainable project development (JMLU2013-09 OC79 3:00). This may involve a range of cooperative measures including individual land-users meeting with proponents’ environmental planning teams, groups of land-users meeting with stakeholders, or Métis Local representatives meeting with multi-stakeholder groups. Such interactions will foster industry-community cooperation between proponents, grass-roots community members and governmental bodies (JMLU2013-09 OC85 10:30).

In sum, ML 1935 is concerned that the Teck Frontier Project will adversely impact heritage food species such as moose, bison and fur-bearers upon which Métis community members rely for subsistence. In addition, disturbance to fur-bearer habitat in and around the project area would disrupt community trapping and harvesting activities. As a symbol of boreal forest vitality, ML 1935 is greatly concerned about the impact of the Frontier Project on the Red Earth and Richardson Caribou Populations, which are increasingly at risk of habitat fragmentation from the advance of industrial activity. Caribou habitat protection and local population recovery ought therefore to be the priority of wildlife protection plans adopted by project proponents. Study participants lament that the current plans in place in Alberta favour industrial development to the detriment of caribou.

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Figure 3. Trails and Transit Routes in the Frontier Oil Sands TLU LSA

Legend

- Trails and Transit Routes
- Frontier Oil Sands Mine Project

Scale as shown
Base Map from Google Earth
5.2 Traditional Trails, Cabins and Cultural/Spiritual Sites

This section presents traditional land use values indicating the historic and current presence of Métis people on the land, as illustrated by the location of trails, cabins and sites of cultural importance.

5.2.1 Trails

Assessment of the Frontier Project site-related Land Use and Occupancy data revealed at least 26 potential land use value conflicts with trails used by community members (Figure 3). Prior to the late 1960s, when the use of snowmobiles was widely adopted by trappers, dog-team and sled was the primary mode of transportation through the bush, along the Trap Line, and between Trap Line cabins and trading posts. Regional trails and wagon roads would connect outlying Trap Lines to trading posts and residential communities closer to the Athabasca. These trails were often cut by hand and maintenance of trails was a summer occupation for many trappers who had to constantly clear trees and undergrowth to maintain clean trails for winter (JMLU2013-07 T18 19:00). With the adoption of the snowmobile and ATV, these trails continued to be important. As the Fort McMurray area has become more populated and industrial development has intensified, the routes of existing Métis wagon and dog-sled trails were often adopted by the logging industry or foresters. Trails became roads and the maintenance of some of these routes was taken over by provincial or municipal authorities.

Several ML 1935 community members state that they continue to use the existing skidoo trail and cutlines from Bitumount and Klassen’s Landing to the bison habitat area near Ronald and Diana Lakes (TECTLU2014-01 T15-23; TECTLU2014-03 T09-24). Some of these trails pass through the Frontier Project Development Area. Community members and the senior trapper on RFMA 2901 use trails from the Athabasca River through the Teck TLU LSA to gain access to their harvesting area and cabins (TECTLU2014-03 T08; TECTLU2014-01 T14). These community members also use the existing trails through the lease area from the trapline to the harvesting areas around Ronald, Diana, Legend, Lynn, and Namur Lakes to hunt for moose, bison and deer, mainly during the fall and winter, both historically and currently.

Teck Frontier Project Development area is adjacent to the Athabasca River, which is commonly used by Métis community members for water transportation for various reasons. Historically, the river was used for commercial fishing (e.g. McInnis Fisheries [TECTLU2014-06 WT08-10; MLU2013-10 WT-08]) and freight transportation (e.g. Northern Transportation [TECTLU2014-05 WT03-18; TECTLU2014-04 WT10-13; MLU2013-13 WT-05]) between Fort McMurray and Fort Chipewyan. The river was historically a vital transportation link between trapping families living in Métis settled areas along the river and commercial hubs at Fort McMurray and Fort Chipewyan.

Today the Fort McMurray Métis community continue to use the Athabasca River as a means to access harvesting areas, traplines, cabins and culturally important sites along the River including sites within the Teck TLU LSA. Study participants mapped places that they boat on Athabasca River and described regular trips they take from Fort McMurray to Firebag River, Big Point or Fort Chipewyan to pursue activities such as fishing and camping (TECTLU2014-04 WT03-13;
MLU2013-14 WT-44). Community members also use the river as an access route for hunting and trapping (TECTLU2014-08 WT10-21; TLUTEC2014-03 T09-24; MLU2013-04 WT-09). Maintaining open access to the harvesting area is a key concern of the Métis community. Roads used as access routes to would-be industrial sites, particularly in remote areas, are often blocked with gates or concrete barriers when surveying and before early construction activity begins on leases. The presence of security cordons around leases and proposed mining sites is well-known to Métis harvesters. These barriers impede access to harvesting areas and potentially infringe upon aboriginal harvesting rights. Any restrictions on access to harvesting areas from blocked trails within the Teck leases would be detrimental to the rights of the Métis community.

5.2.2 Cabins
Assessment of the Frontier Project site-related Land Use and Occupancy data revealed several potential land use value conflicts with cabin sites (Figure 4).

Historically the Athabasca Riverbanks within the Teck Frontier Project LSA as well as on the east side of the river were inhabited by several extended Métis families including Oakley, Ducharme, McDonald, Bouchier and Grant. Details of this Athabasca River community are provided by Barb Hermanson in her book about her life on RFMA 1275. Métis trapping families lived in cabins close to the Athabasca River where they could be in closer contact with one another and with the barges but trapping took place over much larger areas extending inland from the river for several miles in all directions. The river then, particularly in what is now the Teck TLU LSA, served as a vital link for this community.

Today these cabin sites are still used by trappers, residents and Métis harvesters. Some of these sites are within the Teck TLU LSA and could be at risk of disruption as a result of project development. One of the Trap Line cabin complexes associated with RFMA 1275 is the closest habitation site to the Teck Frontier Project mapped by TLU study participants. The cabin is beside the Athabasca River at Mile 72 at 57°36'33.94"N; 111°30'5.97"W (MotM-MT102-X22-117)). Another cabin whose owner is often visited by community members is found at Mile 64 of the Athabasca River at 57°29'39.78"N; 111°32'48.79"W (MotM-MT102-X03-117). This cabin is located approximately 1.5 km from Teck’s water intake pipe.

Study participants mapped important camping sites at the mouth of the Firebag River (57°45'1.10"N; 111°20'54.91"W), which is approximately 7.5 km east of the Frontier Project area (TECTLU2014-04 X04-13). To get access to the campground, community members travel by boat from Waterways/McMurray. An importat stopping place on this trip is another community member’s cabin at 57°48'44.88"N; 111°21'22.09". The owner of this cabin is a senior licensee of RFMA 1743.

Another cabin was mapped at 57°41'54.89"N 111°24'20.04"W (MLU2013-02 X-43). This would be approximately 5.5 km east of the project site. Additional cabins mapped by study participants are located at 57°40'7.15"N; 111°24'48.37"W (TECTLU2014-03 X12-24),

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57°37'30.69"N; 111°31'5.17"W (TECTLU2014-06 X12-10) and 57°35'11.90"N; 111°30'33.51"W (TECTLU-05 X06-18). All of these cabins are located within the RSA of the Teck Frontier Project area and the project would have environmental impacts to the inhabitants including air, noise, water and traffic-related impacts.

These cabins have provided the community with launching points from which to practice traditional lifeways further north. Considering that they are between Fort McMurray and the Teck Frontier Project site, transportation corridors for equipment and personnel, or use of access roads to the site could cause security concerns for the cabin owners, safety concerns for community members who use the cabins and surrounding land, and disruption to wildlife during construction and operation of the Teck Frontier Project site. Thus the impact of the Teck Frontier Project on these sites is significant and therefore constitutes a major concern for ML 1935.
Figure 4. Cabin sites in the Frontier Oil Sands Study Area

Legend

- Cabin sites
- Frontier Oil Sands Mine Project

Scale as shown

Base Map from Google Earth
Figure 5. Cabin Site Along the River within Teck Frontier RSA

Photo Credit: Tara Joly, August 2014
Figure 6. Cultural/Spiritual Values in the Frontier Oil Sands Study Area

Legend

- Cultural/Spiritual Sites
- Frontier Oil Sands Mine Project

Scale = 1:125,000
Base Map from Google Earth
5.2.3 Cultural/Spiritual sites

Frontier Project site-related Land Use and Occupancy data revealed potential land use conflicts with cultural and spiritual sites as shown in Figure 6. Two burial sites have been identified within the Teck Frontier Project Development Area. One burial site was located half a mile north of Mile 72 (57°37'1.69"N; 111°29'28.63"W) where three Métis children were buried around 1925 (MotM-MT102-BU25-117). The second burial site was mapped at 57°38'37.30"N and 111°34'41.38"W (TECTLU2014-08-BU17-21). At the time of writing, the exact location of the latter burial site had not been verified but it is believed to be within the Teck TLU LSA. Other burial sites are to be found along the Athabasca River within the Teck RSA but just outside the TLU LSA boundaries such as the one pictured in Figure 7. Sled Island on Athabasca River is a significant place for one community member as he was born there in 1928 (NRBS02-BP04-50,51). In addition, his family has a history of hunting and trapping around Sled Island on either side of Athabasca River. Beyond its functional importance for transportation and for fishing, the Athabasca River also has cultural importance to the Métis people. In one interview, the study participant told how his grandfather guided explorer Ernest Thompson Seton on a 2000-mile canoe trip to the Arctic via the Athabasca River in the early 20th century. The expedition passed by hunting camps and lodges along the river in what is now the Frontier Project Development Area (JTMLU2013-18 TS59-207).

Figure 7. Burial Site along the Athabasca in the Teck Frontier RSA

Photo Credit: Tara Joly, August 2014

Figure 8. Subsistence Harvesting and Snaring in the Frontier Oil Sands Study Area

Legend
- Subsistence harvesting and snaring
- Frontier Oil Sands Mine Project

Scale as shown
Base Map from Google Earth
5.3 Hunting and Trapping

Métis harvesters based in Fort McMurray travel extensively throughout the Athabasca River system to hunt and fish for subsistence purposes and to trap commercially. Frontier project site-related Land Use and Occupancy data revealed potential land use value conflicts with hunting and trapping.

5.3.1 Subsistence Harvesting/Snaring

Two main categories of subsistence harvesting within the Teck Frontier Project’s LSA and RSA were identified by study participants. These can be characterized as big game hunting for moose, deer and bison, and trapping beavers. Figure 8 depicts areas used for subsistence harvesting and snaring game for food.

5.3.1.1 Subsistence trapping

One community member trapped beavers just northwest of the Frontier Project and into RFMA 1743 (MLU2013-02 H29). While trapping is considered primarily a commercial activity, Métis harvesters snare game for subsistence purposes alongside commercial activities. Beavers and other fur bearing animals are primarily snared for food although the fur can also be sold or used to make traditional clothing. The participant noted the presence of large numbers of beavers, which were snared and consumed. His father would hunt beavers on the line and would always take the two biggest beavers per lodge.

5.3.1.2 Subsistence Hunting

Metis hunters note moose, deer and bison habitat within and around the Teck Frontier Project site and around Ronald Lake, Diana Lake, Sand Lake, Gardiner Lake and Namur Lake (MLU2013-02 H-29; MLU2013-24 H09; MotM-MT102 H09-117; TECTLU2014-01 H13-23, TECTLU2014-01 H08-23; TECTLU2014-01 H10-23). Some community members use the existing trails that pass through the Frontier TLU LSA to gain access to the wildlife habitat in order to practice their subsistence hunting activities. In the EIA Teck stated that “traditional trails overlapped by the Project Assessment Area (PAA) will be unavailable to traditional users”.

This is a key concern of Métis community members who will face disruptions and access barriers to important hunting sites within the community’s traditional land. Moose hunting is an important part of Métis culture and moose meat is often shared with elders and those who can no longer hunt. In an interview for the Mark of the Métis project, one community member recalled: “When we were younger, like, there was—you never really had a Safeway or anything to go to either … We always just depended on—to go hunting and bag a deer or a moose and that’s what we lived on. We never went to Safeway or IGA, there was no such thing.” While big game hunting has long been the main source of protein for Métis families, the community member lamented that the combination of hunting regulations and restrictions on Métis harvesting.

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20 Teck Resources Limited. 2011. Frontier Oil Sands Mine Project, Integrated Application. Volume 8: People and Places; Section 6: Traditional Land Use; Section 6.5.4.3: Traditional Trails, Cabins and Sacred Sites, Page 6-21.
coupled with industrialization of the landscape has made it more difficult to rely solely on wild meat for food. Nevertheless, Métis harvesters continue to find ways to practice their aboriginal rights to hunt and continue to travel further afield of Fort McMurray to find game, making the area around the Teck Frontier site all the more important for the community’s traditional big game hunting practices.

5.3.2 Commercial Hunting and Trapping

The boreal forest provides abundant resources to the traditional Métis economy. Beyond harvesting forest products for subsistence purposes, Métis people also rely on traditional resources for commercial activities, primarily trapping and outfitting.

5.3.2.1 Commercial Trapping

In the fur trade which dominated the Athabasca River Basin’s economy from the late 18th century to the early 20th century, a predominantly Métis society emerged. The trading posts at Fort Chipewyan, Fort McKay, McMurray/Waterways and Athabasca were connected by a series of smaller outposts, portage routes and Métis villages. The traces of these can still be found at sites such as Pelican Settlement, Grand Rapids/Grand Island, Poplar Point and Embarrass Portage. These sites provided provisions to those working in the fur trade in the surrounding woods and were stocked with dry goods and fuel via the river. Wherever trapping was lucrative and transportation routes accessible, Métis families trapped in the cold months and harvested wild game, picked berries and stockpiled food during the warmer months. While the Catholic Church and the Hudson’s Bay Company shaped Métis culture and civilization at the trading post, governance in the outposts and out on the land was managed in extended family and kin-based networks of harvesters, Elders and community leaders. Wildlife management, usufruct rights to territory and the provision of welfare was decided by “the People who Own Themselves”21 according to local customs. One feature of this system was Trap Line management.

Prior to the 1940s, Métis families recognized their own system of allocation of territory and wildlife management. Intergenerational hunting bands would look after their own areas and coordinate wildlife supply management with neighbouring parties. These territories were large and relatively fluid and families would move seasonally to other territories to camp and harvest plants and food animals when times were plenty and the weather favourable, gathering in larger groups. Traditional or customary Trap Lines were essentially kin-based collective harvesting areas recognized by tradition. As the Alberta Government began to assert jurisdiction over wildlife and natural resource management in the 1940s and 1950s, trappers had to be licensed. Over time the Trap Line system was formalized based on a commercial concept and individual rights. Many Métis families successfully navigated the new system by registering Trap Lines and passing them on to their children over several generations.

In some cases sons and daughters took over Trap Lines adjacent to the family area after a period of apprenticeship. Families would often have two or three adjacent lines held between generations in neighbouring townships. Thus the Trap Line, or Registered Fur Management Area (RFMA) as it came to be called, remained a collective concept: Métis families used the Trap Line as they had customary territories in the past, trapping in winter and using cabin infrastructure in various parts of the Trap Lines (if they were accessible in summer) for hunting, gathering berries and plants and passing on cultural traditions. While trapping is an integral part of the fur trade and it was commercial activity related to the fur industry which played a role in the genesis and propagation of the proto-Métis hunting bands into the modern Métis Nation, trapping was and remains an important part of the subsistence economy. Trapping areas are geographical spaces of economic activity, cultural practices and socialization of youth. While trapping happens primarily in winter when fur coats are thick, animals are hungry and lakes and ponds are frozen and easier for the trapper to navigate; in the summer Trap Lines are used for fishing, berry picking, camping, gathering and hunting. Furthermore, before natural resource legislation and fish and game laws prohibiting permanent Trap Line habitations and gardens, trappers often lived on the line, had gardens, root cellars and even livestock. As children were required to attend school, many trappers moved seasonally into town and the permanent nature of Trap Line settlements declined. Trap Line habitation sites were maintained as seasonal homes and shelters while working in the winter or gathering in the summer. Ancestral trapping areas are vital to the social geography of Métis culture, which includes trapping, subsistence harvesting and living off the land. Despite government regulations intended to reform trapping as a cultural practice and transform it into a purely economic pursuit, shifting trapping areas from customary or usufruct territories to leases through decrees, policy and law, Métis families have maintained their connections to ancestral Trap Lines, often by becoming the licensed Trap Line holder.

Within 5 km of the Frontier Project TLU LSA there are five historic and current RFMAs connected to Fort McMurray Métis community members that potentially will be affected by Teck’s Frontier mine. These are RFMAs 1743, 1275, 1661, 2331 and 2939 shown in Figure 9. In addition, there are three more RFMAs (2809, 2908 and 2901) currently held by Métis community members which the Frontier Project may indirectly impact due to access disruptions. As discussed in Section 5.2.1, the senior and junior holders of RFMA 2901 use trails from the Athabasca River just south of Teck’s leases to access their trapline and cabins (TECTLU-03 $TR01-24). This demonstrates continuity of the deep historic connection of the Métis community to the trapping area within and around the Frontier Project. Considering the historic and actual connections of the Métis community to the identified RFMAs, it is thus considered to be a place of cultural importance as it is the site of inter-generational knowledge transfer about harvesting, subsistence living, trapping and hunting. According to trappers who have worked the area, species include wolverine, beavers, wolf, marten, mink, lynx, squirrels, rabbit and muskrat (JMLU2013-10 $TR42; MLU2013-02 $TR06; MotM-MT05 $TR07-34; TECTLU-03 $TR01-24). Trapping and related Métis cultural practices in that area could become unviable in a short time as habitat destruction and disruption of fur-bearing populations drive animals out. ML 1935 leadership will fully support Métis community members and trappers who are impacted by development of this project and expect that appropriate compensation and mitigation measures will be discussed with the full participation of the community representatives and the RFMA holders, family and junior partners.
Figure 9. Commercial Trapping in the Frontier Oil Sands Study Area
Figure 10. Historic Métis Trapping in the Frontier Oil Sands Study Area Circa 1960

Legend

- Frontier Oil Sands Mine Project

Scale as shown

Map Source
Provincial Archives of Alberta
“Historic Trap Line Map File No, GR1990.0377 PAA”
5.3.2.2 Commercial Hunting

Teck Frontier Project site-related Land Use and Occupancy data revealed 3 potential land use value conflicts with commercial hunting (Figure 8).

In addition to trapping for commercial purposes, some community members work as hunting guides and outfitters for people looking to hunt moose and bison in and just north of the Teck Frontier Project Development Area and along the Athabasca River within the Teck TLU LSA (TECTLU2014-02 $H08; TECTLU2014-02-$H10; TECTLU2014-05 $H04). The junior holder of RFMA 2901 was a moose hunting guide at the Birch Mountain Outfitter for over a decade. He guided tourists from Europe and the United States on moose hunts around Namur and Legend Lakes and in the general area around Birch Mountains (MLU2013-23 H18). Today, the outfitter still operates hunting in the area. According to the interviewee, when tourists shoot a moose, the meat is donated to the Métis community. This represents consistency with traditional Métis practices of sharing meat with community members, particularly the elderly or those who can no longer hunt. Hunting and related Métis cultural practices such as sharing meat with elders will no longer be possible within the Teck TLU LSA once project construction commences.
Figure 11. Commercial Outfitting in the Frontier Oil Sands Study Area

Legend

Commercial Hunting
Frontier Oil Sands Mine Project

Scale = 1:1,250,000
Base Map from Google Earth
5.4 Fishing

Bush meat is not the only source of protein in the Métis community’s diet. The Athabasca River is an important site for subsistence fishing activities as outlined by participants in this Teck project-specific TLU study. While the Athabasca River is not included within Teck’s TLU LSA (the borders of the LSA stop at the river’s edge), the project could prevent access to the west side of the river for fishing activities along the shore. Sites close to the Frontier Project were identified as habitat for grayling, walleye, pike and jackfish (MotM, Fishing Areas Map File). These fish are caught by Métis people to eat, to use as bait for snares, and/or to feed dogs. With the extent of open pit mining along the Athabasca River, community members fear pollution and contamination of the river will make Athabasca River fish unsafe to eat and will have health and safety implications for the community. The proximity of Teck Frontier mine to the Athabasca River compounds these fears about project-related contamination of the Athabasca river system.

5.5 Berry Harvesting

Study participants identified berry-picking patches around the Teck Frontier Project Development Area (Figure 9). Along the winter road from Bitumount to Firebag River is a great place to pick berries (JMLU2013-18 B28). Likewise, the Athabasca Riverbanks are resplendent with many abundant berry patches (TECTLU2014-15 B08-18). One interviewee used to pick berries behind the cabin, located at 57°36'35.45"N; 111°30'8.69"W which is still occupied by an individual with strong connections to the Fort McMurray Métis community. The Frontier TLU LSA is known as a good place to harvest blueberries, raspberries, Saskatoon berries, hazelnuts, strawberries and rosehips (TECTLU2014B08-18).
6. ML 1935 Teck Frontier Project Concerns

Thus far the discussion has centred on the Frontier Project site-specific findings of potential land use value conflicts. As land-users familiar with the project sites, TLU study participants were invited to raise project-specific concerns. Métis community members’ traditional knowledge of past mining projects as well as the knowledge of Teck Frontier’s project development area result in a series of identifiable environmental, socioeconomic, cultural, and consultation process-related concerns.

6.1 Summary of Concerns – Local Study Area

The following observations are Frontier Project-specific concerns based on Métis environmental knowledge of the project TLU Local Study Area as illustrated in the maps above and as defined in the 2011 EIA. These observations have been made based on Métis Environmental Knowledge as presented in the land-use interviews.

6.1.1 Land Use

*Threats to Subsistence Harvesting and commercial trapping in the Frontier Project Local Study Area:* there are several key sites for Métis fishing, trapping and hunting which will be severely threatened by the project. These include fish habitat in the Athabasca River and adjacent creeks; furbearer habitat in RFMAs 1743, 1275, 1661, 2331 and 2939; moose, bison and bison habitat around the Frontier project development areas, including Ronald and Diana Lakes and Birch Mountain.

6.1.2 Environment and Biodiversity

*Frontier Project Site Infrastructure and Wildlife Habitat Fragmentation:* the Frontier Project will require additional site access roads, utility corridors for power lines, water supply pipes from Athabasca River and plant infrastructure, including airfield and camp. This site infrastructure and access lines connecting to regional infrastructure will destroy and/or fragment wildlife habitats in and around the project site. The noise from plant operation and transmission lines will drive out animals (TECTLU2014-02 HLA25; JMLU2013-15 OC42 1:04:30; JMLU2013-02 OC70 1:10:00; JMLU2013-17 OC107 1:19:00).

*Deforestation and Boreal Forest Fragmentation Degrades Wetlands:* Métis environmental knowledge suggests that the retention of water in muskegs depends on tree cover. Fragmentation of forests and deforestation in wetlands leads to increased drainage and eventual loss of muskeg. This has extensive impacts to fur bearing species as well as fish and fish habitat, which are essential to Métis harvesting and the exercise of Aboriginal rights (TECTLU2014-04 HF09; JMLU2013-05 Other24 23:00; JMLU2013-04 OC89 1:27:20).

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22 Teck Resources Ltd, 2011, Frontier Oil Sands Mine Project Integrated Application, Volume 8 People and Places, Figure 6-1, Traditional Land Use LSA and RFMAs.
Spills and Environmental Damage often goes Unreported: Some of the participants have cited that in the past environmental contamination and spills often went unreported, (JMLU2013-16 OC62 1:09:30). This raise concerns of contaminating fish and fish habitat in Athabasca River.

Reclamation Efforts Need to Start Prior to Construction: More intensive efforts are required to document and preserve native plant species, hydrology and forest/tree type. Local land-users are willing to provide input into this process if invited (JMLU2013-09 OC82 8:00). One example of how Métis land users can assist is in the cataloguing of rare and medicinal plant species (JMLU2013-09 OC83 9:45).

Caribou Habitat Fragmentation: Fragmentation of the boreal forest habitat that is favoured by caribou, which feed only on lichen and moss, put the threatened species at further risk of predation from wolves that take advantage of the longer sight lines and deeper snow in open clearings. Habitat fragmentation requires remedy and measures must be taken in cooperation with Métis knowledge holders to dissuade wolf predation of caribou in the Project Development and surrounding areas (JMLU2013-09 OC80 4:37).

Impact of Additional Traffic on Wildlife population and Caribou Morbidity: The Frontier Project will add to traffic volume on the proposed road from either Canada Natural Resources Ltd’s (CNRL) Horizon project or across the Athabasca River to the Frontier Main Development Area.23 This will further put at risk wildlife including caribou, moose, deer and bison for road-accident related mortality (JMLU2013-19 OC67 1:05:20).

Noise and Activity of Construction and Operation Disturb Animals: Noise from traffic and heavy machinery during construction disturbs animals while plant operation creates noise which drives animals away from the site, particularly in fall and winter when the trees are bare and sound barriers are reduced (JMLU2013-11 OC92 53:30; JMLU2013-09 OC78 2:00).

6.1.3 Socioeconomic and Cultural Impacts
Project Development Area represents Loss of Hunting Terrain: Restrictions on site access force trappers and hunters to go to different areas for commercial and subsistence land use purposes (TECTLU2014-03 T31). This loss of harvesting terrain impedes youth from getting out on the land and hampers intergenerational knowledge transfer and cultural learning (JMLU2013-17 OC106 1:18:00; JMLU2013-15 OC43 1:07:00; JMLU2013-11 OC95 55:50; JMLU2013-04 OC94 1:31:00; JMLU2013-03 OC72 52:10; JMLU2013-03 OC77 01:10; JMLU2013-02 OC59 53:50; JMLU2013-01 OC72 1:22:00).

Camp Infrastructure, Traffic and Waste: As each mining project has a camp for personnel, Frontier’s camp facilities will mean more people will be frequenting the area. The camp will require water and sewer service. There will be more traffic on local roads and access routes.

Camps produce sewage and domestic garbage, which will require disposal (JMLU2013-17 OC108 1:19:30).

Site Workers’ Awareness of Local Aboriginal Culture and Respect for Current Land Use: the Frontier Project site workers could benefit from programs to raise awareness about local Métis history, culture and the requirements of subsistence land users. This would create awareness and respect for Aboriginal land use among workers through more positive interaction based on communication (JMLU2013-13 OC79 1:05:30, JMLU2013-08 OC77 1:30:00).

Inequality of Opportunity and Income for Local Workers: Local workers, particularly Aboriginal workers, are not provided the same employment incentives and salary benefits such as living allowances and travel expenses that outside or migrant workers are offered. This results in inequality of outcome for local Aboriginal people who still face the same inflated costs of housing and consumer goods as migrant workers (JMLU2013-13 OC82 1:11:00).

Security of Property in Harvesting Areas: Population increase in Fort McMurray and the prevalence of temporary workers has created security risks to the persons and property of land users. Trucks left near roads while hunters are in the bush are often vandalized or targeted by thieves (JMLU2013-08 OC72 1:24:50). Trap Line cabins have been vandalized and property stolen (JMLU2013-05 OC49 43:00).

6.1.4 Consultation

Use of Plain-Language Documents and Verbal Explanations for Technical Concepts: Métis interviewees have identified a need for industrial project proponents to communicate technical information and scientific concepts including potential environmental, biodiversity and health-related impacts of projects in plain language. It is not reasonable to expect that community members who are not scientifically trained will read Environmental Assessment reports and discuss these with proponents. Representatives of the proponent are asked to communicate technical information about the impacts of its mining project on the environment and watershed, wildlife and humans to elders and younger community members in plain language documents or verbally through presentations (JMLU2013-12 OC66 1:44:00).

Need for Clear Explanation of the Source of Water Draws: It is of the utmost importance that Teck communicates to the public its process for sourcing water used at the site. It must be explained clearly in plain language any potential risks this might create for the Athabasca River as this is a source of some concern for study participants (MLU2013-02 OC37; JMLU2013-12 OC64 1:40:00; JMLU2013-10 OC62 1:17:50; JMLU2013-09 OC77 1:00 JMLU2013-03 OC75 59:45; JMLU2013-02 OC65 1:01:40).
6.2 Summary of Concerns – Regional Study Area

The following concerns relate to Teck Frontier’s impact to land use, the environment and socioeconomic conditions within the Regional Study Area.

6.2.1 Land Use in the Regional Study Area

Restrictions on Access to Métis Community-used Habitation Sites within RSA: Trap Line cabin sites (historic and current) within RFMAs 1275, 1661, 2331 and 2939 could be disrupted by the construction of access roads and project-related infrastructure. ML 1935 requests that efforts are made to avoid disruption to these sites and keep access open to community members.

6.2.2 Environment and Biodiversity

Air pollution at Site and in Region: The Frontier Project will contribute additional sulphur and carbon emissions as well as vehicle and machinery exhaust, dust and H₂S gas (JMLU2013-08 OC81 1:34:00).

With Rapid Pace of Development, Sites are not being Reclaimed but Abandoned: Some of the study participants have observed that with the present pace of development being, commitment to reclamation is neglected (JMLU2013-04 OC91 1:29:00; JMLU2013-04 OC96 1:35:10; JMLU2013-02 OC64 1:01:15).

Inadequacy of Existing Caribou Protection Efforts and Need for Active Habitat Protection and Population Recovery Efforts: The study participants and Métis environmental knowledge holders continue to observe caribou population decline in once viable habitats as the pace of industrialization accelerates and habitat fragmentation deepens. Clearly existing caribou habitat protection guidelines and Alberta Government standards for habitat protection are not adequate. A more active and aggressive Caribou habitat protection plan, which includes Caribou population recovery efforts needs to be adopted immediately in order to stave off local caribou extirpation. Métis land users and environmental stewards are eager to participate by sharing local knowledge of caribou habitat to promote landscape level habitat protection and ethical and caribou-sustainable project development for the Frontier Project (JMLU2013-09 OC79 3:00). This may require multi-stakeholder industry-community cooperation between proponents, community members and government (JMLU2013-09 OC85 10:30).

6.2.3 Socioeconomic and Cultural Impacts

Pace of Development: The pace of development is in itself a concern and study participants encourage proponents to pursue environmentally and socially responsible development in consideration of the needs and circumstances of the local Aboriginal population, workforce and business community (JMLU2013-12 OC09 17:00).
Strain on Fort McMurray and Area Public Infrastructure from Temporary Workforce: The Frontier Project will bring in additional workers to the area from outside the region, requiring camp accommodation (JMLU2013-13 OC82 1:11:00). Additional workers in camp put pressure on public services including hospitals, roads and water supplies.

Increased Traffic and Pollution on Local Roads: The Frontier Project will contribute to regional and cumulative impacts to traffic and air pollution creating dangers to motorists and local land users, particularly along the proposed road (JMLU2013-08 OC61 1:09:00).

Loss of Traditional Knowledge and Disruption of Inter-generational Knowledge Transfer: Industrialization creates opportunities for youth employment but it also entails a loss of space and time to devote to traditional harvesting which disrupts the transfer of cultural knowledge, wilderness survival and environmental knowledge. Some people feel they are literally being pushed off the land by development (JMLU2013-08 OC78 1:32:00). The main source of this disruption is the collapse of the fur trade and the declining viability of trapping as an occupation as local inflation has occurred and multiple and conflicting land uses for industry reduce space available for trapping (JMLU2013-08 OC76 1:29:00).

6.2.3 Consultation
Sincerity of Commitment to Address Community Concerns: Past study participants note that proponents ask the public and community members to raise concerns. However some of the participants observed that in some cases proponents fail to deal with concerns (JMLU2013-04 OC93 1:30:00). One way that the proponent can demonstrate respect and commitment to dialogue with the community is to work to mitigate project disruptions on access for local harvesters where safety considerations permit (JMLU2013-14 OC125 1:37:00).

6.3 Contribution to Cumulative Impacts – Cultural, Environmental, Socio-Economic

The following concerns were raised in regards to the contribution of the Frontier Project to cumulative environmental impacts in the region, temporal or long-term environmental impacts and the effect of industrial development on Métis harvesting practices and traditional cultural sustainability.

6.3.1 Environment and Biodiversity
Commitment to Regional and Cumulative Effects Monitoring: Air and water quality, human health, wildlife habitat quality, biodiversity and fish habitat quality require ongoing monitoring and multi-stakeholder and multi-sectorial cooperation. This extends to reclamation of abandoned sites. Industry, government, environmental groups and community organizations need to cooperate to provide oversight and hold proponents accountable for environmental quality and impact mitigation prior to commencement, during operations and after project productive lifespan ends (JMLU2013-04 OC97 1:35:10)
6.3.2 Socioeconomic and Cultural

Uneven benefits of Development: While industrial development creates jobs and injects money into the region, it also impacts traditional land use by diminishing crown land available to harvesters and driving people out of areas they once hunted, fished and trapped (JMLU2013-15 OC49 1:14:00). Industrialization favours the young, educated and mobile while imposing costs on the elderly and retired population, particularly through housing and rental costs.

6.3.3 Consultation

The Need for Transparent, Arms-Length and Multi-Sector Monitoring: Multi-stakeholder groups require capacity for members of the general public, academics, environmental groups, scientists and Aboriginal groups to have equal opportunities to engage with government and industry in monitoring programs as well as policy bodies (JMLU2013-18 OC109 1:25:00).

6.4 Recommendations

The concerns identified in the previous section relate to project-specific impacts to Métis harvesting, land use, socioeconomic conditions, and the environment. Some of these impacts require redress at the regional level in cooperation with multiple stakeholders from civil society and government. However, some of these concerns can be addressed through the direct action of the proponent in cooperation with ML1935. The suggested recommendations outlined below are designed to provide a framework or starting point for further negotiation and impact avoidance, mitigation or compensation and will be modified with ongoing consultation and dialogue. These recommendations are consistent with Teck’s project impact mitigation measures (though not identical) as outlined in Section 6.5.4.1 of the Project Integrated Application. 24 Teck’s mitigation measures refer to Aboriginal community engagement and participation in water quality and fisheries resources management, wildlife habitat monitoring and reclamation, vegetation reclamation and harvesting prior to disturbance, trapping compensation, biodiversity management including participation in CEMA, community participation in end land use reclamation, access management planning, criteria for reclamation success and recording and avoiding trails, burial sites, spiritual sites and historical resources. 25

1. Concern: impact to large animal, fur bearer animal and fish harvesting areas within and around the Frontier Project.

   Recommendation:
   a. Provide a forum for ongoing consultation with trappers and harvesters including open house discussions, information sessions, impact avoidance brainstorming, and potential site visits with community members.

24 Teck Resources Ltd. 2011, Frontier Oil Sands Mine Project Integrated Application, Volume 8: People and Places, Section 6: Traditional Land Use, p. 6-18.
25 Ibid, p.6-18 to 6-20
2. **Concern:** Proposed road construction (either from CNRL’s Horizon project or across the Athabasca River to the Teck Frontier Main Development Area).

   **Recommendation:**
   a. Plans for proposed road must be communicated to community members of ML1935 prior to construction.
   b. Develop local study area access management plan for Métis harvesters.

3. **Concern:** Air and water pollution at site.

   **Recommendation:**
   a. Monitor air and water quality and minimize impact on wildlife.
   b. Participate in regional and multi-stakeholder monitoring programs.
   c. Support Métis community involvement in organizations such as CEMA, JOSM, etc..

4. **Concern:** Lack of commitment for reclamation and reforestation after completion of Frontier Project.

   **Recommendation**
   a. Involve Métis community members in native plant identification and cataloguing prior to commencement;
   b. Fund Teck Frontier project-specific *Métis Environmental Knowledge Assessment* to determine pre-development baseline for terrain suitability for subsistence harvesting of fish, large animals, and fur-bearers.

5. **Concern:** Inadequate Caribou Protection Plan

   **Recommendation**
   a. Consultation with community members to identify and delineate critical caribou range and habitat.
   b. Cooperation with Alberta Caribou Protection planning and implementation.

6. **Concern:** Increased traffic on local roads to Frontier Project creates Safety and Security Concerns

   **Recommendation**
   a) Limit construction traffic to weekdays and regular working hours;
   b) Identify and promote best practices and routes for safe access to harvesting areas.
   c) Restrict recreational use and hunting/fishing activities among camp staff and employees with the exception of Métis community members/employees.
7. **Concern:** Protecting burial sites and the exact location of the burial site at the South Development Area of the Teck Frontier is unknown.

   **Recommendation:**
   a) Consult with community members to identify the exact location of the burial sites and perform field verification to ensure the integrity of these sites are protected.

8. **Concern:** Contribution to regional and cumulative impacts of development including environmental degradation, cultural change, economic transformation, and impacts to traditional subsistence harvesting.

   **Recommendation:**
   a) Develop work plan with ML 1935 for ongoing consultation and project impact mitigation.
   b) Provide opportunities for employment for Métis workers.
   c) Offer contracts to Métis community-owned businesses.
   d) Fund Métis community development initiatives including elder care, cultural centre, and Métis scholarship and youth programming.

9. **Concern:** Impacts to commercial outfitting and guiding activities that employ Métis guides, hunters, and trappers.

   **Recommendation:**
   a) Inform ML1935 of potential land use conflicts between Frontier Project and licensed commercial outfitters and hunters within project-related Wildlife Management Units.

### 7. Conclusions and Limitations of the Study

Information from a total of 224 land use and traditional knowledge interviews were included for assessment by cross-referencing them with the Teck Frontier Project Development Area. In addition nine interviews were conducted specifically for this project in which the project development area maps were shown to the participants and project-specific questions were asked. 80 potential land use conflicts were identified in the project footprint with additional sites identified around the project. Specific issues identified in the project footprint include:

- Potential impacts to wildlife habitats including moose, caribou, deer, bison, and fur-bearer and fish habitats.
- Burial site within proximity the project TLU LSA (unidentified) and sites along the river within the project RSA (identified).
- Impacts to habitation sites including permanent cabins/lodges in the LSA and RSA.
- Subsistence land use in the project local study area in reference to hunting for moose, bison, elk, and subsistence fishing.
- Potential disruption to traditional trails and transit routes.
- Potential conflict between Métis land use and the project site on RFMAs 1743, 1275, 1661, 2331, 2939, 2809, 2908 and 2901. This potential conflict is of high importance due to the centrality of this Trap Line to historic and actual Métis community intergenerational and cultural knowledge transfer.
- Potential conflict with commercial outfitting activities.

Study participants’ knowledge of the Frontier Project site suggests impacts to trapping and hunting activities through fur-bearer and large animal habitat fragmentation and site-access restrictions. Potential land use conflicts involve restrictions of access to areas for hunting and loss of effective terrain for hunting due to animal habitat fragmentation. In addition to land use value conflict, study participants raised a series of project-specific concerns about land use, the environment and biodiversity, particularly caribou habitat destruction and population decline, socioeconomic and cultural impacts of industrialization on the Métis community and specific concerns over the consultation process.

There are several caveats associated with this report. While a great deal of information was presented, interviews referenced in this assessment were performed with only a sample of the membership of Fort McMurray Métis Local 1935. There may be great deal more information on Métis Land Use and Occupancy in the project areas and regional study areas yet to be discovered. Not every community member with experience and knowledge of the proposed project sites was consulted during the course of the study and the conclusions. This summary, while accurate in broad terms, may not accurately describe the individual experience of each member of the community. Furthermore, interviews were conducted within a short timeframe, interviewees were asked to provide information about sites covering a large geographic area and the information provided in interviews was not verified through field visits. Comprehensive collection and verification of land use information generally requires a lengthy process lasting many months and even years, whereas this assessment was completed in a short time in order to meet regulatory timelines. Despite the limitations and caveats, the results demonstrate the Métis harvesting continues to be important to the Métis community in an area that is undergoing rapid change as a result of industrial expansion. Industrial development has and will likely continue to impact subsistence harvesting. The benefits of industry are distributed unequally in some cases, favouring the young, educated and mobile while older community members are left to deal with reduced access to affordable housing, healthcare services and rising food, gas and commodity prices. With the information provided in this report, Métis Local 1935 has clear empirical evidence of its members’ land use patterns in the project areas and can use the report to engage in ongoing consultation and negotiation with Teck Resources Ltd. In order to address project impacts and negotiate impact mitigation measures.
8. References


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9. Appendix

9.1 Species Referenced

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### 9.2 Land Use Values/Codes

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