20. ASSESSMENT OF ABORIGINAL AND TREATY RIGHTS AND RELATED INTERESTS

20.1 INTRODUCTION

This chapter assesses potential adverse effects on Aboriginal and Treaty rights and related interests which may arise from the Project during construction, operations, decommissioning/reclamation, and post-closure. Underground mining activities have the potential to adversely affect Aboriginal and Treaty rights by interfering with Aboriginal groups' ability to engage in practices, customs, and traditions that are integral to their distinctive cultures, and/or by interfering with the exercise of rights expressly recognized in a treaty. Interference with Aboriginal and Treaty rights is generally indirect, resulting from changes to environmental conditions that are necessary for the continued exercise of Aboriginal and Treaty rights.

The assessment is based on information derived from the Proponent's engagement with potentially-affected Aboriginal groups, environmental assessments carried out elsewhere in the Application/EIS, and the review of secondary data. Wherever possible, the assessment addresses potential effects on Aboriginal and treaty rights and related interests as understood from the perspective of the Aboriginal groups in question.

Baseline reports informing this assessment are appended to the Application/EIS and include: Ethnographic Overview and Traditional Knowledge and Use Desk-Based Research Report (Appendix 17-A) and Saulteau First Nations Knowledge and Use Study for HD Mining Murray River Coal Project (Appendix 17-B).

20.2 REGULATORY AND POLICY FRAMEWORK

The Crown has a legal duty to consult with and, where appropriate, accommodate Aboriginal interests when it contemplates a conduct that might adversely impact the potential or established Aboriginal or Treaty right. The Crown delegated procedural aspects of this duty, with respect to the Project, to the Proponent through the Section 11 Order and EIS Guidelines.

According to Section 10.1 of the Section 11 Order, "for the purpose of developing the Application, the Proponent must consult with the First Nations with respect to the potential effects of the proposed Project on their Treaty 8 rights." The Section 11 Order defines Treaty 8 rights in the following terms: "'Treaty 8 Rights' are considered by the court to be "proven" rights for the purposes of section 35(1) of the *Constitution Act*, 1982, including the rights to hunt, fish and trap and the ancillary activities associated with carrying out these rights throughout the tract of land included in the treaty." According to Section 3.1.2 of the Order, the scope of the Assessment/EIS includes consideration of "potential adverse effects on the First Nations' Treaty 8 rights and other interests, and to the extent appropriate, ways to avoid, mitigate or otherwise accommodate such potential adverse effects and to properly uphold the Crown's obligations with respect to treaty rights."

Section 10.2 of the EIS Guidelines provides the following requirements:

The EIS will describe, from the perspective of the proponent, the potential adverse impacts of the project on the ability of Aboriginal peoples to exercise the potential or established Aboriginal and Treaty rights and related interests identified in Section 9.2. As part of this description, this section will summarize:

- Potential adverse impacts (on potential or established Aboriginal and Treaty rights and related interests) that were identified through the environmental effects described in sections 10.1.2 and 10.1.3;
- Specific issues and concerns raised by Aboriginal groups in relation to the potential adverse impacts of the project on potential or established Aboriginal and Treaty rights and related interests;
- VCs suggested for inclusion in the EIS, whether or not those factors were included, and the rationale for any exclusions;
- Where and how Aboriginal traditional knowledge or other Aboriginal views were incorporated into the consideration of environmental effects and potential adverse impacts on potential or established Aboriginal and Treaty rights and related interests; and
- Efforts undertaken to engage with Aboriginal groups as part of collecting the information identified above.

The EIS Guidelines also require the following:

- The assessment of the potential adverse impacts of each of the project components and physical activities, in all phases, will be based on a comparison of the exercise of the identified rights between the predicted future conditions with the project and the predicted future conditions without the project.

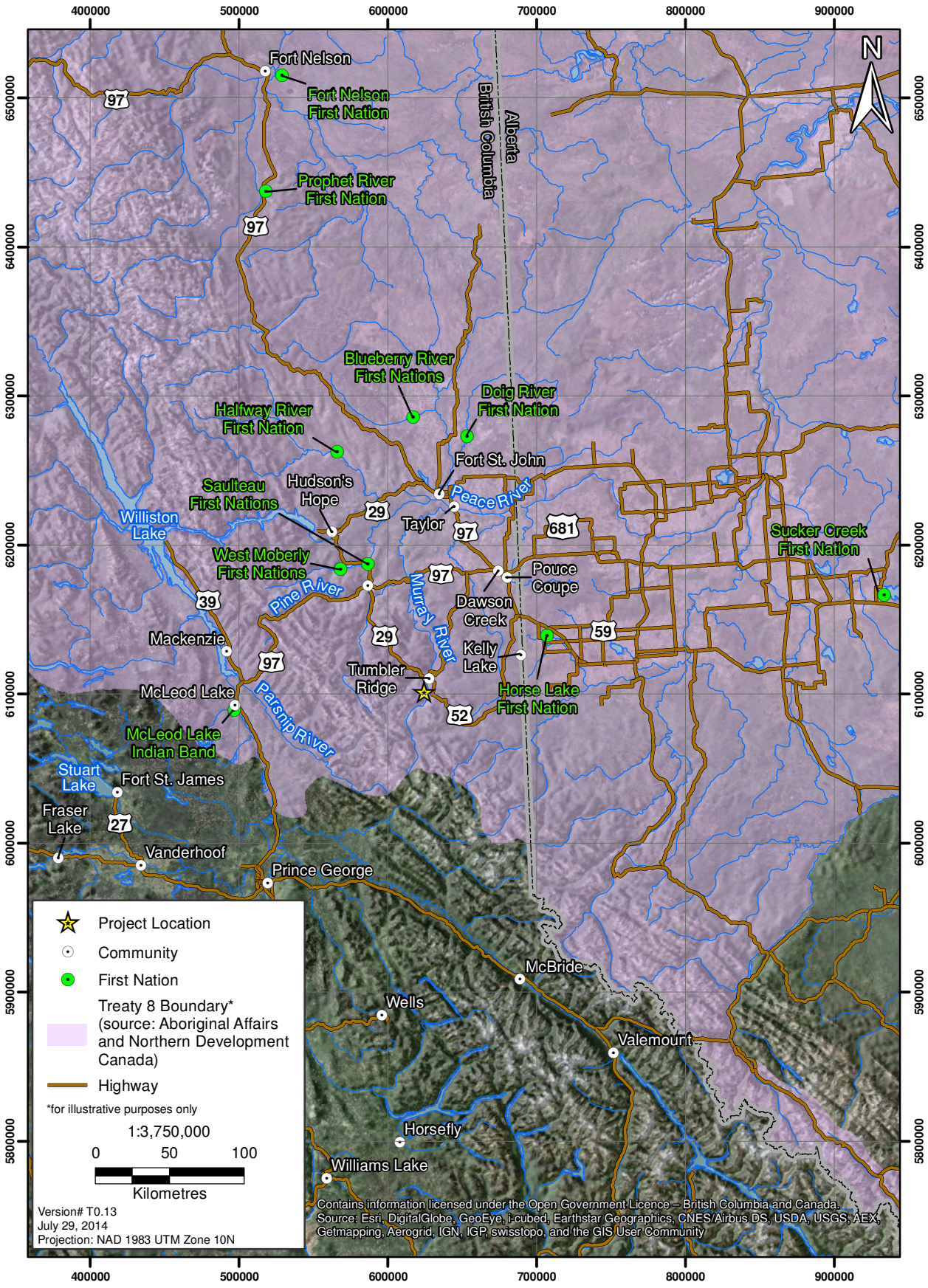
This assessment was informed a number of policy guidance documents developed by the Crown, including: the *Guide to Involving Proponents when Consulting First Nations in the Environmental Assessment Process (BC), Updated Procedures For Meeting Legal Obligations When Consulting First Nations (BC), Guide to Involving Proponents When Consulting First Nations (BC), Aboriginal Consultation and Accommodation - Updated Guidelines for Federal Officials to Fulfill the Duty to Consult - March 2011 (Canada).*

20.3 OVERVIEW OF ABORIGINAL GROUPS CONSIDERED IN THE ASSESSMENT

The Project is located within the boundaries of Treaty 8 (Figure 20.3-1). In November, 2012, the BC EAO provided the West Moberly First Nations (WMFN), Saulteau First Nations (SFN), Halfway River First Nation (HRFN), Fort Nelson First Nation (FNFN), Prophet River First Nation (PRFN), Doig River First Nation (DRFN), Blueberry River First Nations (BRFN) and the McLeod Lake Indian Band (MLIB) its understanding of Treaty 8, its initial review of the potential impacts from the proposed Project on treaty rights and its proposed consultation approach with those Treaty 8 First Nations. The BC EAO determined that the proposed Project area lies in (or is in the vicinity of) the traditional use territories of the WMFN, SFN, and MLIB. On this basis, the Section 11 Order issued by the BC EAO on December 14, 2012 defined "First Nations" to mean the WMFN, SFN and MLIB.

Figure 20.3-1

Treaty 8 Boundaries



On July 30, 2013, the CEA Agency issued EIS Guidelines for the Project. Section 9.2 of the EIS Guidelines identifies Aboriginal groups whose potential or established Aboriginal rights and Treaty rights and related interests may be adversely affected by the Project. These groups include: BRFN, MLIB, SFN, WMFN, and Horse Lake First Nation (HLFN). Section 9.2 identifies additional Aboriginal groups whose interests may be affected by the Project. These Aboriginal groups include, DRFN, FNFN, Halfway River First Nation (HRFN), Prophet River First Nation (PRFN), Kelly Lake Métis Settlement Society (KLMSS), and Métis Nation British Columbia (MNBC). Subsequent to the issuance of the EIS Guidelines, the CEA Agency brought in Sucker Creek First Nation at the low end of the consultation spectrum based on the First Nation's assertion that their Treaty 8 rights and related interests may be affected by the Project. On July 31, 2013, the CEA Agency presented Aboriginal groups with information about the potential adverse effects of the Project on Aboriginal groups' Aboriginal and Treaty rights. On the basis of the Project's location within asserted traditional territories of BRFN, the MLIB, SFN, WMFN, and HLFN and potential Project interactions with these groups' Treaty rights to hunt, trap and fish, the CEA Agency determined on a preliminary basis that the depth of the duty to consult with these groups is at the high end of the consultation spectrum. On the basis of the Project's location outside of other Treaty 8 First Nations and Metis' asserted traditional territories, the CEA Agency determined that the depth of the duty to consult with these groups is at the low end of the consultation spectrum. Figure 20.3-2 identifies the locations of Aboriginal Groups in relation to the Project.The following sections provide background information about each Aboriginal group identified in the Section 11 Order, the EIS Guidelines, and any groups subsequently identified (Sucker Creek First Nation).

20.3.1 Ethnographic Overview

The Project is located in an area traditionally used and inhabited by Dane-zaa (Beaver), Cree, Tsek'ehne, and Saulteaux peoples (Figure 20.3-3).

20.3.1.1 Dane-zaa

The Dane-zaa are Athapaskan-speaking people of the plains and boreal forests of the middle and lower Peace River watershed (R. Ridington 1981). Goddard (1916) identified three regional groups of Dane-zaa from the "eastern base of the Rocky Mountains in British Columbia along the Peace River to the falls about forty miles below [Fort] Vermilion [in north-central Alberta]." Those trading at Fort St. John (known as the Tsaᵋt'ū, whom Mackenzie [Lamb 1970] referred to as the "Rocky Mountain Indians") hunted northward to the headwaters of the Liard River and camped as far up the Peace as the North Pine River. Three bands (*wədəne?)* inhabited areas close to the project, including: the *klue-la* or 'fish people', associated with the BRFN; the *kleze-ne*, who lived south of Peace River around Pouce Coupe and Dawson Creek ca. 1900; and the *dodachin*, or Moberly Lake Dane-zaa who were sometimes called the "west end" people, to distinguish them from the Saulteaux, Cree and Iroquois living on the east end of Moberly Lake (1968). In the post-contact period, the Dane-zaa moved westward into the mountains along the Halfway River, and across the height of land into the headwaters of the Liard drainage along the Sikanni Chief, Prophet, and Muskwa rivers.

Figure 20.3-2
Location of Aboriginal Communities near the Project

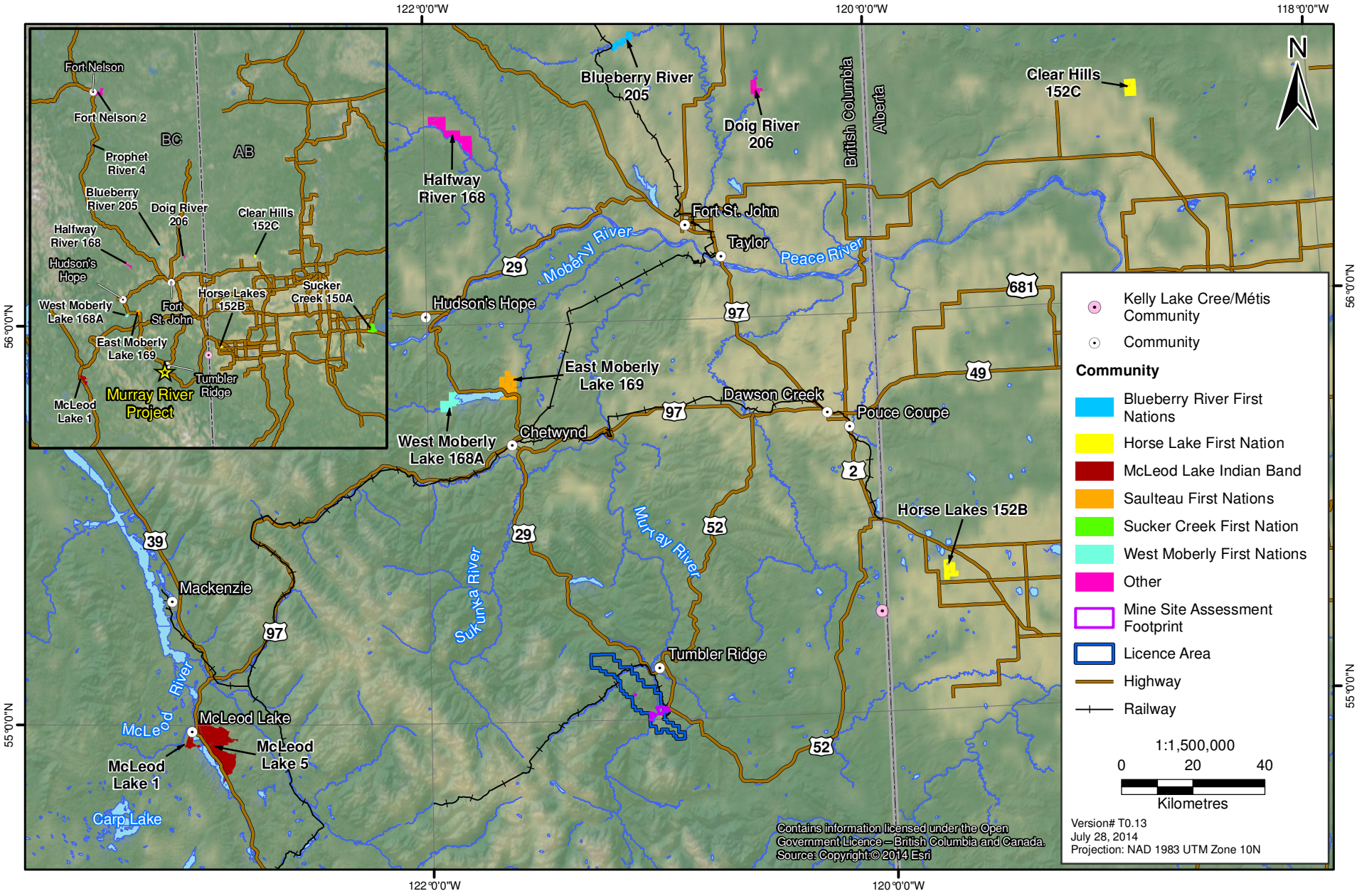
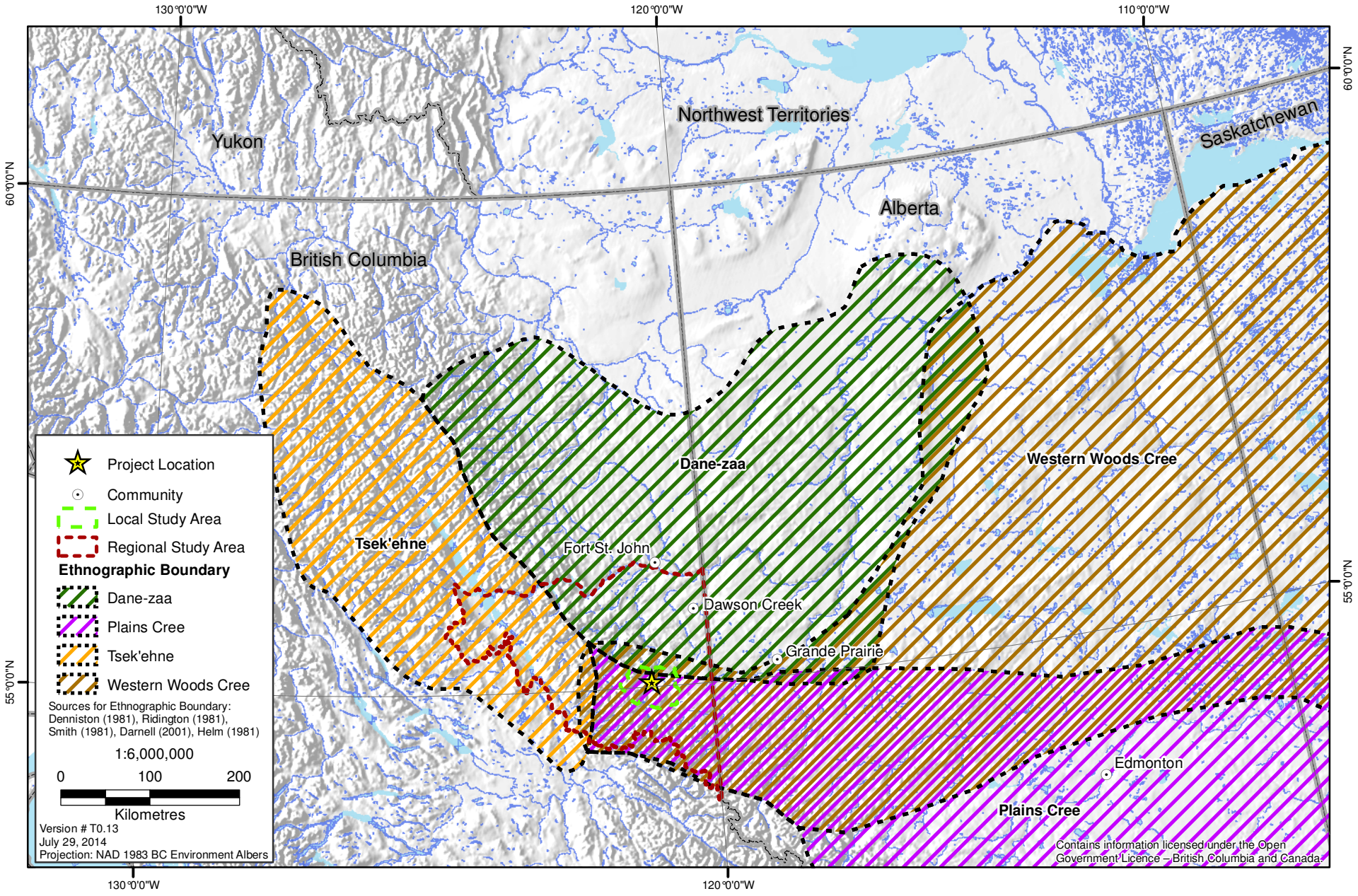


Figure 20.3-3

Range of the Tsek'ehne, Dane-zaa, Western Woods and Plains Cree Ethnographic Boundaries ca. 1850



20.3.1.2 Tsek'ehne

The Tsek'ehne are part of the Beaver-Sarcee-Sekani branch of the Athapaskan language family (Denniston 1981). Tsek'ehne peoples traditionally inhabited the mountainous areas of BC drained by the Finlay and Parsnip branches of the Peace River[1] (Denniston (1981)). In the late 1700s, Tsek'ehne spent the late fall to early spring on the east side of the Rocky Mountains with their territory extended down the Peace River as far as the present-day town of Peace River, Alberta (Jenness (1937)). By the early 19th century, the Tsek'ehne were forced westward into the mountains by the Dane-zaa (Lamb 1960) and the eastern boundary of their territory was pushed back along the Peace River to near Hudson's Hope, BC (Jenness 1937). Jenness (1937) recorded the names and ranges of four Tsek'ehne regional groups of the early 19th century: the *Tsekani* ("rock people" or "mountain people"), who inhabited the region from McLeod Lake south to the height of land and east to the edge of the Prairies; the *Yatuwichan* ("lake people"), who inhabited the north end of McLeod Lake down the Parsnip River to Rocky Mountain Canyon on the east and westward to the upper Salmon River of the Fraser drainage, and to Carp Lake and the headwaters of the Manson and Nation tributaries of the Parsnip; the *Sasuchan* ("people of the black bear"), who inhabited the basin of the Finlay River from the mouth of the Omineca River north and west, including Bear and Thutade lakes were in their range; and the *Tseloni* ("people of the end of the rock [mountain]"), who occupied the Plateau country between the headwaters of the Finlay and Laird Rivers and around Fort Nelson (Sims 2010).

20.3.1.3 Cree

Cree are Algonquian-speaking peoples who traditionally occupied the subarctic woodland areas between Hudson Bay and Lake Superior (Smith 1981). Upon contact with the Hudson's Bay Company in the 1700s, Cree began to move west with the fur trade. Major divisions include the Plains Cree (of Alberta and Saskatchewan), the Woods Cree (of Saskatchewan and Manitoba) and the Swampy Cree (of Saskatchewan, Manitoba, Ontario, and Quebec). Cree peoples in the Peace Region of BC may be Plains Cree, whose territory extended to the foothills of the Rocky Mountains in Alberta (Mandelbaum (1979)), or Strongwoods Cree offshoots of the Western Woods Cree, who inhabited the forest areas transitional to the prairies and to the Rocky Mountains in the late 18th century (Smith 1981).

20.3.1.4 Saulteaux

The Saulteaux are Anishinaabe speaking peoples who historically inhabited the area around Lake Superior and Lake Winnipeg, principally in the areas of present-day Sault Ste. Marie, Ontario. Interaction with British and French fur traders and American settlers pushed the Saulteaux westward to Manitoba, Saskatchewan and Alberta. The Saulteaux in these areas speak the Western Ojibwa variant of the Algonquian language family (Steinbring 1981). In the 1870s, a Saulteaux group migrated westward from southern Manitoba, intermixing with Cree and adopting the Cree language among other cultural aspects. The migration terminated at Moberly Lake, BC, where the Saulteaux settled and later intermarried with the Cree and Dane-zaa already living in the area (Ballantyne 1978; FPCC 2012a).

[1] Much of this area was inundated by the erection of the WAC Bennett Dam and the creation of Williston Lake (see Section 4.5.4).

20.3.1.5 Métis

The Métis arose as a culturally-distinct people with their own cultural identity, settlements, language, and traditions from the union of European (predominantly French and Scottish) men and First Nation women during the 17th and 18th century fur trade (Metis National Council n.d.). Métis first established themselves along the southwest rim of the Canadian Shield. They began to settle in numbers along the Red River in Manitoba. As a consequence of being employed in the fur trade/transport system, they moved west and north from the Red River (Helm, Rogers, and Smith 1981), settling in the northern parts of the prairie provinces of Canada and in the Mackenzie District of the Northwest Territories, with some communities extending into the Yukon and Alaska (Slobodin 1981). The Kelly Lake Métis claim to be descendants of the westernmost extension of the Métis who migrated with the fur traders during this period.

20.3.2 Treaties and Political Organization

20.3.2.1 Treaty 8

Treaty 8 was negotiated between the federal government and Cree, Beaver, Chipewyan and other Aboriginal groups in 1899. Adhesions were made in 1899, 1900 and 1910. WMFN and SFN were admitted to Treaty 8 in 1914 (Madill 1986). The MLIB adhered to Treaty 8 in 2000 (BC EAO 2012). The treaty covers 840,000 km^2 (84,000,000 ha) encompassing northeast British Columbia, northern Alberta, the northwestern corner of Saskatchewan, and part of the Northwest Territories. Treaty 8 promises its signatories the right to "pursue their usual vocations of hunting, trapping, and fishing throughout the tract surrendered heretofore described, subject to such regulations as may from time to time be made by the Government of the country, acting under the authority of Her Majesty, and saving and excepting such tracts as may be required or taken up from time to time for settlement, mining, lumbering, trading, or other purposes." In exchange for surrendering their lands, signatory First Nations would receive Indian Reserves based on 640 acres for each family of five; families or individuals who wished to live off reserve would receive "land in severalty to the extent of 160 acres to each Indian." Treaty 8 provisions also include entitlements to land, ongoing financial support, and provisions for education, farm stock, farm implements, ammunition, twine, and clothing (Madill 1986).

Treaty 8 has been further articulated and interpreted by the courts. In *Mikisew Cree First Nation v. Canada (Minister of Canadian Heritage)*, 2005 SCC 69, the Supreme Court of Canada determined that Treaty 8 First Nations' "meaningful right to hunt" is not ascertained on a treaty-wide basis "but in relation to the territories over which a First Nation traditionally hunted, fished and trapped, and continues to do so today" (*Mikisew*, at para. 48). Consequently, the test for infringement of Treaty 8 rights is to be analyzed in relation to Treaty 8 First Nations' traditional territories. Moreover, while the Crown has the right to "take up" lands covered by Treaty 8, it is nevertheless under an obligation to inform itself of the potential impacts such actions may have on the exercise of Treaty 8 rights; to communicate its findings to the potentially affected First Nations; and to engage with the First Nations in good faith with the intention of substantially addressing their concerns. In in *West Moberly First Nations v. B.C. (Chief Inspector of Mines)*, 2011 BCCA 247, the BC Court of Appeal determined that Treaty 8 "guarantees continuity in traditional patterns of economic activity and respect for traditional patterns of activity and occupation".

Treaty 8 rights are described by some Treaty 8 First Nations as "livelihood rights," entailing that the Crown has an obligation to secure a continuous supply of game and fish for First Nations' subsistence. In addition, some Treaty 8 First Nations assert that Treaty 8 rights include cultural, spiritual, social, and economic components (BC Hydro Power and Authority 2013a). Treaty 8 First Nations also assert that activities incidental to the practice of Treaty 8 rights are protected under Treaty 8, according to *Simon v. The Queen*, [1985] 2 SCR 387.

In Alberta, economic components of Treaty 8 (i.e. the right to hunt commercially) were extinguished under the Natural Resource Transfer Agreement (1930), as determined by the Supreme Court of Canada in R. v. Horseman, [1990] 1 SCR 901.

20.3.2.2 Treaty 8 Tribal Association

The Treaty 8 Tribal Association (T8TA) represents five of eight Treaty 8 First Nations in northeastern BC. The mandate of the organization is "to engage with the collective member First Nations on political and technical priorities and to provide advisory services for the purpose of achieving economic prosperity, self-sufficiency, protection of the land and a healthy environment; while preserving the culture and Treaty rights and interests" (Treaty 8 Tribal Association 2014). WMFN and SFN are members of T8TA.

Individual Treaty 8 First Nations governments (comprised of a Chief and Council) also advocate on the behalf of their members through negotiations with the Crown and industry.

20.3.2.3 Métis Nation British Columbia

MNBC was established under as the Métis Provincial Council of British Columbia in 1996. Métis leadership ratified the Métis Nation British Columbia (MNBC) Constitution in 2003. MNBC represents 34 Métis Chartered Communities in British Columbia and is mandated to "develop and enhance opportunities for Métis communities by implementing culturally relevant social and economic programs and services." MNBC's Governing Assembly is composed of seven elected Regional Directors, the elected representative for the Métis Women of British Columbia, the elected representative for the Métis Youth of British Columbia, the President, and the Vice-President (Metis Nation BC n.d.).

Métis Nation British Columbia is recognized by the provincial and federal governments and the Métis National Council as the official governing organization in the province of British Columbia, representing more than 9,000 provincially registered Métis citizens and a population of nearly 70,000 self-identified Métis people (Metis Nation BC n.d.).

20.4 ASSESSMENT METHODS

Effects to Aboriginal and Treaty rights are defined as Project-related limitations on the ability of Aboriginal groups to practice Aboriginal and treaty rights.

The assessment of potential effects on treaty rights and related interests proceeded in six steps for each Aboriginal group:

1. Review of consultation undertaken with the Aboriginal group;
2. Identification of the Aboriginal group's understanding of its treaty rights and related interests;

3. Identification of the Aboriginal group's past, present and future exercise of their treaty rights and related interests;
4. Identification of measurable parameters for the Aboriginal group's treaty rights and related interests, from the perspective of the Aboriginal group where available;
5. Assessment of potential effects of the Project on the exercise of the Aboriginal group's treaty rights and related interests;
6. Identification of measures to mitigate potential effects of the Project on the Aboriginal group's treaty rights and related interests; and
7. Identification of residual effects of the Project on the Aboriginal group's treaty rights and related interests.

Key materials used to identify Aboriginal groups' understanding and exercise of their treaty rights and related interests include:

- minutes from the Project-related meetings with Aboriginal groups;
- Aboriginal groups' written Project-related correspondence, including comments on the draft AIR;
- information provided by WMFN, SFN, and the MLIB's third party review of the Project;
- SFN' traditional land use study prepared for the Project;
- publically-available materials associated with other, related environmental assessments, including BC Hydro Power and Authority's proposed Site C Project;
- Aboriginal-Crown agreements relating to lands and resources; and
- legal decisions relating to Aboriginal groups' treaty rights and related interests.

Where information regarding Aboriginal groups' understanding of potential Project effects on the exercise of their treaty rights and related interests is not currently available, publically-available information was drawn on to identify the types of concerns raised by Aboriginal groups in other, related cases.

For each measurable parameter, potential effects on Aboriginal groups' treaty rights and related interests were assessed by:

1. describing the Aboriginal groups' past and current exercise of the right or interest under consideration;
2. identifying concerns raised by the Aboriginal group about the potential effects of the Project on the right or interest, if any;
3. drawing on the findings of assessments undertaken elsewhere in the Application/EIS that are germane to the exercise of the right or interest, including potential interactions with the Project, predicted effects, mitigations measures, and significance ratings; and

4. drawing conclusions about potential adverse effects of the Project on the right or interest on the basis of changes in the quantity and quality of resources utilized during the exercise of Aboriginal and treaty rights, access to those resources, or other considerations impacting the exercise of rights (such as changes in the sensory environment), as determined through step # 3 above. This assessment includes a comparison of future conditions for the exercise of the right or interest *with* the Project and future conditions *without* the Project.

Where site-specific information regarding the exercise of Aboriginal groups' treaty rights and related interests in the vicinity of the Project is not currently available, the assessment adopts a precautionary approach. The assessment extrapolates from treaty rights and related interests identified within an Aboriginal group's traditional territory to assume that these rights and interests are exercised in the vicinity of the Project.

Mitigation measures were developed specifically to address potential effects on Aboriginal groups' treaty rights and related interests, in addition to mitigation measures developed for VCs assessed in other chapters in the Application/EIS. To the greatest extent possible, these measures were developed by identifying mechanisms suggested by Aboriginal groups during consultation and through review of the materials listed above.

In accordance with the wishes of Aboriginal groups, the assessment does not seek to characterize and evaluate potential effects in detail (including assessment of significance), but identifies areas of potential infringement to inform Crown-Aboriginal group consultation and accommodation processes. Aboriginal traditional knowledge and other views, as identified through consultation and the materials listed above, were integrated into each of the assessments six steps, to the greatest extent possible.

20.5 EFFECTS ASSESSMENT FOR WEST MOBERLY FIRST NATIONS

20.5.1 Consultation with West Moberly First Nations

20.5.1.1 Engagement Activities Undertaken by the Proponent

The Proponent began consulting with WMFN with respect to the Project and WMFN's Aboriginal and treaty rights and related interests upon acquiring the Murray River coal property in 2009. Following the issuance of the Section 11 Order in December 2012, the Proponent provided WMFN with a draft First Nations Consultation Plan for its review and comment. WMFN did not provide any comments and the plan was accepted by the BC EAO and posted on the BC EAO e-PIC website on October 8, 2013. Consultation with WMFN has consisted of a number of face-to-face meetings, correspondences, site visits, and a community information session. The Proponent has engaged in discussions with WMFN on economic development and protocol agreements and discussions are continuing. The consultation record is described and documented in Chapter 2: Information Distribution and Consultation.

To assist WMFN's capacity to participate in the EA process, in April 2013, the Proponent agreed to fund a third party technical review of the Application/EIS, conducted by Pottinger-Gaherty Ltd. (PGL) on behalf of the WMFN, SFN, and MLIB. The third party review process provides an independent

review of the technical issues associated with the Project and provides an opportunity to identify and resolve First Nations' concerns and issues. To date, PGL has: 1) held a community scoping meeting with the three First Nations to identify issues of concern; 2) provided the Proponent with a summary of issues, concerns and interests arising from the community scoping meeting; 3) provided comments on the Project's dAIR; 4) participated in Working Group meetings; 5) commenced technical review of Project baseline reports; and 6) provided comments on the EIS Guidelines.

The Proponent distributed a draft *Desk-based Ethnographic Overview and Traditional Knowledge / Traditional Use Report* to WMFN on November 1, 2012 for its review and comment (Appendix 17-B). The Proponent asked WMFN to identify information gaps, inaccuracies and/or concerns and to provide additional information with respect to its TK/TU. The Proponent offered to assist WMFN in its review of the draft report and the collection of any additional information. On March 18, 2013, WMFN indicated to the Proponent its preference to identify a consultant of its choosing to undertake a TK/TU study. To date, the WMFN has not initiated a TK/TU study.

In December 2013, the Proponent agreed to fund a socio-economic baseline study for the WMFN. As of the date of this writing, the completed report was being reviewed by Chief and Council and had not been provided to the Proponent.

The Proponent provided WMFN with a draft First Nations Consultation report for its review and comment on March 21, 2014. The draft report detailed engagement activities to date, issues, concerns or interests, Proponent responses and proposed mitigations, and consultation planned for the Application/EIS review phase. WMFN did not provide comments on the draft report.

The Proponent wrote to WMFN on April 25, 2014 to provide WMFN members with a plain language summary of the proposed Project and to summarize the types of information that will be included in the Application/EIS. The latter document outlined the Proponent's understanding of WMFN's Aboriginal and treaty rights and related interests as related to the Project, issues and concerns raised by WMFN with respect to the Project, valued components of potential interest to WMFN, and the Proponent's proposed approach to assess potential impacts of the Project on WMFN's Aboriginal and Treaty rights and related interests. To date, WMFN has not provided a response to the Proponent.

20.5.1.2 Overview of West Moberly First Nations' Key Comments and Concerns

WMFN have raised the following key concerns about the Project:

- Potential effects on hunting, fishing, trapping, and gathering;
- Potential effects on caribou and other wildlife;
- Potential effects on water use and water quality;
- Potential effects on fish and fish habitat;
- Potential effects on plant health;
- Potential effects on spiritual and ceremonial sites; and
- Potential effects related to noise and visual/aesthetic quality.

A detailed list of WMFN's comments and concerns, and the Proponent's responses, are located in Appendix E of Chapter 2. Issues and concerns raised by WMFN that specifically relate to WMFN's Aboriginal and treaty rights and related interests are identified within each assessment topic in Section 20.5.4.

20.5.1.3 Responses Provided by the Proponent

During meetings and through correspondence, the Proponent provided WMFN with further information about the Project, including how the Project design will minimize wildlife habitat effects by creating a small footprint, utilizing already disturbed land, and using existing access roads. The Proponent informed WMFN of its decision to make a substantial change from an approximately four kilometre overland conveyor that would cross Murray River to a second underground decline under Murray River, and how this change will reduce potential effects to wildlife mobility associated with linear developments, fish habitat, and archaeological sites. In response to WMFN's and other Aboriginal groups' comments, the Proponent made a number of changes to the Project's draft Application Information Requirements, including: modification of fish and fish habitat VCs to be more inclusive of all potential fish species, including Arctic Grayling; adding dust deposition to a list of contaminants; expanding the spatial extents of the groundwater model; inserting of a description of wetland functions to be assessed; and including of bullet point indicating the exposure to contaminants will be assessed as a potential effect to wildlife VCs.

A detailed list of WMFN's comments and concerns, and the Proponent's responses, are located in Appendix E of Chapter 2. Section 20.5.4 provides a detailed assessment of the potential Project effects on WMFN's Aboriginal and treaty rights and related interests.

20.5.1.4 Future Planned Engagement Activities

The Proponent will continue engage with WMFN throughout the Application/EIS review period as outlined in the First Nations Consultation Plan, Chapter 2 of the Application/EIS, and the scope of the third party review process provided to the Proponent by PGL. Planned engagement activities with WMFN include:

- Responding to technical comments on the Application/EIS submitted to the Proponent by WMFN's third party technical reviewer (PGL);
- Arranging teleconferences with WMFN's third party technical review (PGL) to resolve outstanding technical issues;
- Arranging higher level workshops with WMFN to discuss and resolve issues that cannot be resolved at the technical level;
- Responding to WMFN's formal comments on the Application/EIS; and
- Arranging meetings with WMFN to discuss potential adverse effects of the Project on WMFN's Aboriginal and treaty rights and related interests, if any, and proposed mitigation measures.

20.5.2 Baseline Conditions

20.5.2.1 Traditional Territory and Reserves

The WMFN community is located on West Moberly Lake 168A, a 2,033 ha Indian Reserve situated at the west end of Moberly Lake, approximately 90 km southwest of Fort St. John and 30 km north of Chetwynd (Figure 20.3-2; AANDC 2012).

WMFN were accepted into Treaty 8 in 1914. WMFN identifies the Peace River sub-basin as their preferred Treaty territory (West Moberly First Nations 2012) and a smaller area closer to the West Moberly reserve as an Area of Critical Community Interest (ACCI; Figure 20.5-1)[2]. Within the ACCI, WMFN identifies a 1,090 km^2 area of land as of particular concern, referred to as the Peace-Moberly Tract (Integrated Land Management Bureau 2006).

The Project area is situated within the WMFN "preferred treaty territory" (West Moberly First Nations 2012), but is located outside of the Peace-Moberly Tract and ACCI.

20.5.2.2 Ethnography and Language

WMFN members are of Dane-zaa and Cree descent (Kennedy 2011); the use of "Nations" in the WMFN name is in recognition of mixed ancestry. Members generally identify as "Mountain Dunne Za," people of the Rocky Mountain foothills (Treaty 8 First Nations Community Assessment Team and The Firelight Group Research Cooperative 2012). Few WMFN members currently speak Dane-zaa. Only one member speaks and understands the language fluently, two individuals somewhat understand and/or speak the language, and 23 individuals are learning the language (FPHLCC 2014a). Nēhiyawēwin (Cree) is the predominant Aboriginal language in the community (FPCC 2012b) and English is the primary spoken language.

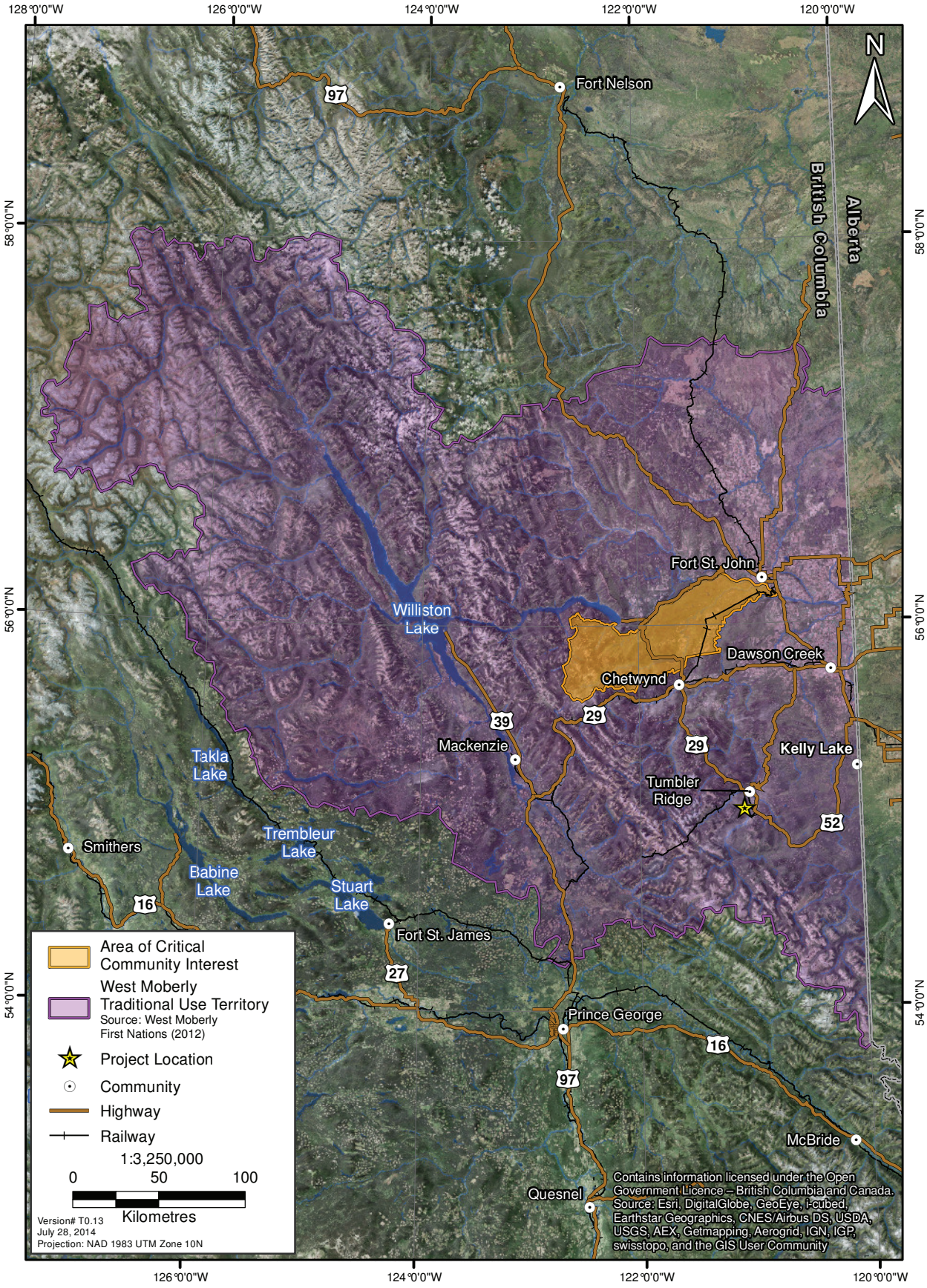
20.5.2.3 Population and Governance

As of September 2013, WMFN had a registered population of 270 people, with 109 persons living on-reserve and 161 persons living off-reserve (AANDC 2013). WMFN' on-reserve population increased by approximately 86% between 2006 and 2011 (Stats Can 2012c).

WMFN is governed by a Chief and four Councillors (one from each of the key family groups), who are elected according to a custom electoral system (AANDC 2013). The Chief is elected by the entire community, while each family determines their own method of selecting their councilor. The Chief does not have a vote in council (EPCOR 2009). Land use issues are generally administered by the WMFN Land Referral Office.

[2] The ACCI is also an area of common interest with SFN BC, SFN, and WMFN. 2006. *The Peace Moberly Tract Draft Sustainable Resource Management Plan*. http://archive.ilmb.gov.bc.ca/slrp/srmp/north/peace_moberly/final_draft_PMT_SRMP-July19.pdf (accessed March 2012)..

Figure 20.5-1
West Moberly First Nations Traditional Territory



20.5.2.4 Economy

WMFN continues to engage in a non-market subsistence economy. In addition, the Nations engage in a number of market-based economic activities.

WMFN operates businesses in the forestry, energy, construction, and tourism sectors. The Chetwynd Community Forest is jointly operated by WMFN, SFN and the District of Chetwynd. Dunne-Za Ventures LP provides services to the oil and gas, forestry and mining sectors, including forestry, earthworks, transportation, road upgrades (e.g., aggregate crushing), and clearing. Dunne-Za contracts work out to other band-owned and operated companies, including: Sipugahma, Daneli Contracting, Stone Creek Environmental Services, Dokkie and Sons Contracting, Aurora, Xpert Safety and Slashing Ent., Krosstec Controls, GBA Oilfield Construction, and A.J. First Aid Services. WMFN also has a joint venture agreement with the Black Diamond Group Limited, which provides remote accommodations and energy services for large resource development projects (MarketWired 2010; PRCI 2010). Tarpon WestMo Services Ltd., a joint venture between WMFN and Tarpon Energy Services Ltd., was established to supply electrical and instrumentation services, controls systems and steel building solutions to the energy sector in northeastern British Columbia and has constructed the Dunne-za Lodge on the north shore of Moberly Lake with guest cabins for rental accommodations (Finavera 2011).

WMFN members are employed in public administration, forestry, retail trade, mining, and oil and gas sectors, with some employment in agriculture and tourism (PRCI 2010; Statistics Canada 2013e). Within these sectors, WMFN members occupy positions in education, law and social, community and government services and in trades, transport and equipment operation. The current WMFN unemployment rate is 25% (Statistics Canada 2013e).

20.5.2.5 Land Use Setting and Planning

WMFN traditionally used land in their traditional territory for hunting, trapping, and gathering (BC, SFN, and WMFN 2006; West Moberly First Nations Land Use Department 2009; Treaty 8 First Nations Community Assessment Team and The Firelight Group Research Cooperative 2012). They utilized harvested materials for a variety of purposes, including food, heat, shelter, tools, trade items and crafts. Currently, many WMFN members engage in subsistence activities in their traditional territory, including hunting, trapping, and fishing.

WMFN has developed a number of natural resource management plans and agreements within its traditional territory. In the early 1970s, WMFN enacted a traditional law placing a moratorium on caribou harvesting of caribou by band members in an effort to stay the dwindling caribou population harvesting by band members in an effort to stay the dwindling caribou population. In 2006, WMFN, SFN and BC developed a draft Sustainable Resource Management Plan (SRMP) for the Peace Moberly Tract (BC, SFN, and WMFN 2006). In 2009, WMFN, together with Doig River First Nation and Prophet River First Nation, signed five agreements with BC related to wildlife, provincial parks, land use planning, and economic benefits flowing from the use of Treaty 8 lands including: Amended Economic Benefits Agreement; Government-to-Government Protocol Agreement; Parks Collaborative Management Agreement; Wildlife Collaborative Management Agreement; and Strategic Land and Resource Planning Agreement (BC MARR 2010). Among other things, the Strategic Land and

Resource Planning Agreement provides a framework for the establishment appropriate designations and other mechanisms to address the meaningful exercise of rights for the various "Treaty 8 Significant Areas," or areas identified by the parties as particularly critical to the preservation of the meaningful exercise of Treaty 8 First Nations' rights. In May 2010, WMFN, together with Doig River First Nation and Prophet River First Nation, signed a final agreement and four resource management agreements with BC, including: Crown Land Management Agreement; Heritage Conservation Memorandum of Understanding; Long-term Oil and Gas Agreement; and Forests and Range Resource Management Agreement (BC MARR 2010). In 2013, WMFN released a draft "Action Plan for the Klinse-Za Herd of Woodland Caribou (Rangifer tarandus caribou) in Canada" (Jarvis 2013).

WMFN is currently negotiating with Canada and BC to resolve WMFN's claims (accepted by Canada) regarding asserted shortfalls in their original Treaty 8 land entitlements (BC MARR 2014).

20.5.2.6 Summary of West Moberly First Nations' Treaty Rights and Related Interests

WMFN were accepted into Treaty 8 in 1914, establishing treaty rights to hunt, trap, and fish in their traditional land use areas within Treaty 8. WMFN draw on verbal promises made at the time when treaties were concluded and case law (e.g. *Mikisew Cree First Nation v. Canada*) to characterize Treaty 8 as assuring livelihood rights with respect to traditional patterns of economic activity (hunting, trapping and fishing) in their traditional territory (West Moberly First Nations Land Use Department 2009).

The Nations describe their Treaty 8 rights as including their "mode of life" based on their traditional seasonal round, which targets specific species during different times of the year in specific locations (West Moberly First Nations Land Use Department 2009). WMFN hold that their mode of life is tied to their cultural identity, intangible cultural heritage (worldview, myths and spirituality), and to systems of ecological knowledge which are passed between generations (West Moberly First Nations Land Use Department 2009). The Nations consider that their Treaty rights to hunt, trap and fish are tied to a number of purposes, including their exercise for the procurement of food, clothing, and tools, as well as for medicinal, ceremonial, spiritual, cultural, and commercial purposes (West Moberly First Nations Land Use Department 2009).

20.5.2.7 Past, Present and Anticipated Future Uses of the Project Area by West Moberly First Nations

The Proponent has been unable to collect primary data to date regarding WMFN's past, present or anticipated future use of the Project area. The following description is drawn from publicly available secondary sources and archaeological studies.

The Assessment of Heritage Effects (Chapter 19) documents 72 known prehistoric archaeological sites within the assessment's RSA (Figure 19.5-1). Most of these sites are related to use of the landscape for activities such as hunting and resource gathering. Lithic scatters (scatters of stone tools and stone waste chips) are the most common archaeological site types found in the RSA. It is not known whether any of these sites were produced by the ancestors of WMFN.

WMFN's Dane-zaa ancestors traditionally harvested resources during a seasonal round that extended from Summit Lake in the south up to the boundaries of the Kwadacha Nation, in what used to be the valleys of the Parsnip and Finlay Rivers prior to the creation of the Williston Reservoir. WMFN's used lands up towards Halfway River to near the Alberta border along the Peace River (Treaty 8 First Nations Community Assessment Team and The Firelight Group Research Cooperative 2012). Dane-zaa hunted and trapped a wide variety of species, including woodland caribou, moose, elk, mule deer, grizzly bear, black bear, goat, mountain sheep, hoary marmot, bison, porcupine, beaver, and fur bearing animals (Jenness 1937; R. Ridington 1968; Brody 1981). Dane-zaa relied on fishing to supplement game procured through hunting (R. Ridington 1968), catching species native to the region, including lake trout, bull trout, walleye, northern pike, burbot, Arctic grayling, and mountain whitefish (Treaty 8 First Nations Community Assessment Team and The Firelight Group Research Cooperative 2012; Site C First Nations Engagement Team 2013). Dane-zaa peoples followed a seasonal round characterized by five distinct periods: the fall dry-meat hunt, early winter hunting and trapping, late winter hunting and trapping, spring beaver hunting, and the summer slack (Brody 1981).

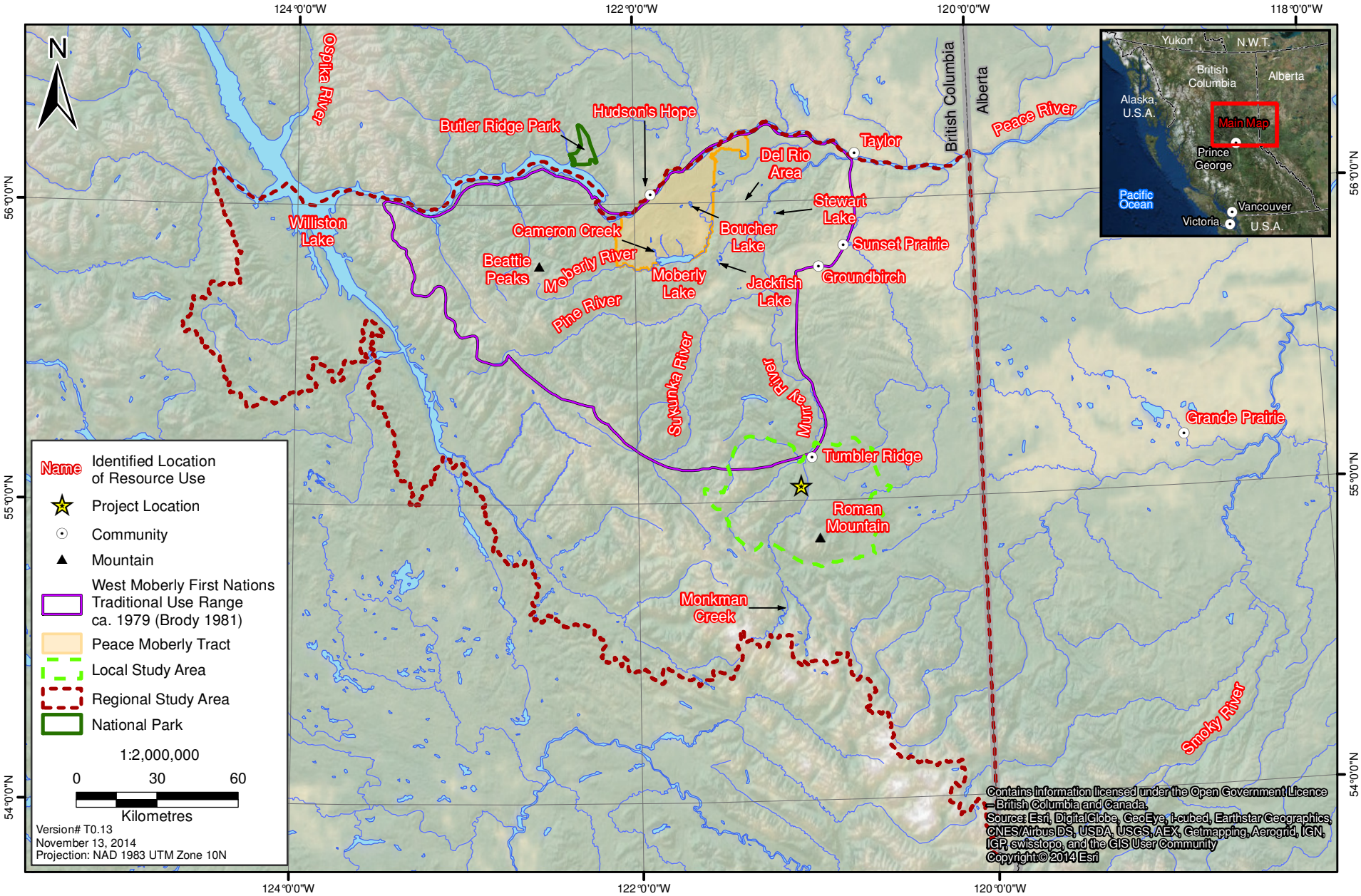
WMFN members continue to hunt, trap, fish, and gather throughout their territory (Figure 20.5-2). Members preferentially harvest west of Moberly Lake, up Johnson Creek Road and South Moberly Road (Treaty 8 First Nations Community Assessment Team and The Firelight Group Research Cooperative 2012). Members consider the Pine River, Moberly River, Cameron Lakes and Boucher Lake to be critical hunting and gathering areas (Treaty 8 First Nations Community Assessment Team and The Firelight Group Research Cooperative 2012). Other hunting areas include the area around Groundbirch, the Rice property west of Stewart Lake, Sunset Prairie, Del Rio, Cameron Creek, Butler Ridge, and Tumbler Ridge (West Moberly First Nations 2012). Some hunting areas have been identified in the Monkman Pass and Trail region, including areas north of Roman Mountain (Robinson 1983; PRCI 2010). Priority game species for WMFN members are, in order of importance, caribou, moose, elk and deer (Site C First Nations Engagement Team 2013).

WMFN consider the Peace Moberly Tract to be the best remaining habitat for moose and the "motherland" of ungulates hunted by WMFN members (Site C First Nations Engagement Team 2013). Members fish for trout (lake, Dolly Varden and rainbow), whitefish, jackfish and other species in the Peace River and its tributaries, including Moberly River and Halfway River. WMFN harvest berries at Stewart Lake and upper Moberly River (West Moberly First Nations 2012). Areas used to gather medicinal plants and materials used in cultural ceremonies, crafts and other goods include the Peace Moberly Tract, Stewart Lake, and upper Moberly River (West Moberly First Nations 2012).

WMFN members continue to follow a seasonal round (Treaty 8 First Nations Community Assessment Team and The Firelight Group Research Cooperative 2012). The fall moose hunt, during which food is gathered for the winter, is the most important harvest of the year. Small game, including rabbits and grouse, are harvested during the late fall. Winter is primarily a time for trapping while the spring brings the beaver hunt. Yearly "culture camps" are held every August, where youth and adults learn about hunting, carving moose, skinning moose, making hides, and making dry meat (Site C First Nations Engagement Team 2013).

Figure 20.5-2

West Moberly First Nations - Locations of Traditional and Current Land Use



Mountain Dunne-za peoples held spiritual and cultural connections with the land, as evidenced through their myths, dreaming practices, 'medicines', spirit quests, and other practices (Goddard 1916; Jenness 1937; Brody 1981; R. Ridington 1988, 1990). WMFN members continue to hold and engage in traditional spiritual values, beliefs, and practices, including respect for animals and habitat, beliefs that animals are akin to people, smudging, paying the land, thanking harvested animals, and ceremonial activities such as tea dances, sweats, sun dances, and pipe ceremonies (West Moberly First Nations Land Use Department 2009; Treaty 8 First Nations Community Assessment Team and The Firelight Group Research Cooperative 2012).

WMFN provide no indication that they will cease exercising their Aboriginal and treaty rights and related interests in the future. The Nations actively seek to transmit knowledge and skills to future generations while expressing concern that past, present and future activities in their territory combine to curtail their ability to practice their rights (Treaty 8 First Nations Community Assessment Team and The Firelight Group Research Cooperative 2012). In the absence of information suggesting otherwise, it is anticipated that WMFN members will continue to use lands and resources in the vicinity of the Project as they do at present.

20.5.3 Scope of the Assessment

20.5.3.1 Valued Components Suggested by West Moberly First Nations for Inclusion in the Application/Environmental Impact Statement

During a community scoping meeting held by WMFN, SFN, and MLIB on April 16, 2013, community members identified the following VCs, in addition to those already identified in the AIR, for inclusion in the Application/EIS:

- **Atmosphere**: climate;
- **Fish and Fish Habitat:** arctic grayling;
- **Terrestrial Ecology:** plant health;
- **Wildlife and Wildlife Habitat**: little brown bat, gosling hawk, swans, reptiles (snakes), wolverine, green-throated warbler, wildlife health;
- **Social**: aesthetics, treaty rights; and
- **Human Health**: community and worker health and safety.

Chapter 6: Assessment of Air Quality and Greenhouse Gases Effects does not include climate as a VC as current scientific knowledge does not allow for the effects of any individual project on climate change to be assessed due to the global scale, uncertainty, and complexity of assessing effects of collective anthropogenic greenhouse gas emissions on climate. Instead, the chapter assesses the potential of the Project to produce greenhouse gases, which are compared with sector, provincial, federal, and international levels, consistent with guidance by the CEA Agency.

Chapter 9: Assessment of Fish and Fish Habitat Effects includes Arctic Grayling as a VC.

Chapter 11: Assessment of Terrestrial Ecology Effects includes Harvestable Plants as a VC.

Chapter 13: Assessment of Wildlife Effects includes the little brown bat within the Bats VC, gosling hawk within the Raptors VC, swans within the Waterbirds VC, wolverine within the Furbearers VC (fisher as a representative species), green-throated warbler within the Songbirds VC (black-throated warbler as a representative species). Reptiles were excluded as a VC as there are no reptile species of conservation concern in the area and the assessment of other terrestrial species acts as a proxy for snakes. Wildlife health is not included as a VC as this is a general concept that is captured by the specific wildlife assessments.

Chapter 16: Assessment of Non-traditional Land Use Effects excludes aesthetics as a VC, but includes changes in visual quality as potential effects to other VCs.

Chapter 15: Assessment of Social Effects does not include community and worker health and safety as a VC as the Project will be required to operate under the *Health, Safety and Reclamation Code for Mines in BC*. Community safety is addressed under the Crime and Other Social Problems VC.

This chapter (Chapter 20: Assessment of Aboriginal and Treaty Rights and Related Interests) assesses potential Project effects on treaty rights.

20.5.3.2 Incorporation of West Moberly First Nations' Traditional Knowledge and other Views into the Assessment

The Proponent was unable to collect primary data regarding WMFN's traditional knowledge pertaining to the Project area to date. The Proponent will continue to engage with WMFN and will incorporate WMFN traditional knowledge into the Application/EIS, where appropriate, if and when such information is provided.

20.5.3.3 Identification of Measurable Parameters

The Proponent has been unable to obtain information from WMFN about its understanding of the factors that affect the ability of WMFN members to exercise their Aboriginal and treaty rights and related interests. A review of publicly-available information reveals factors that WMFN (together with other Treaty 8 Dane-Zaa First Nations) consider necessary to ensure "sufficient" lands and resources for the meaningful practice of Treaty 8 rights. According to the Nations, sufficiency "refers not only to quantity but [also to] quality, and is evaluated from the perspective of what is required to fulfill not only subsistence requirements, but also cultural needs of the First Nation now and into the future" (Treaty 8 First Nations Community Assessment Team and The Firelight Group Research Cooperative 2012). These factors include:

- routes of access and transportation;
- water quality and quantity;
- healthy populations of game in preferred harvesting areas;
- cultural and spiritual relationships with the land;
- abundant berry crops in preferred harvesting areas;
- traditional medicines in preferred harvesting areas;

- experiences of remoteness and solitude on the land;
- feelings of safety and security;
- lands and resources available within constraints of time and cost;
- socio-cultural institutions for sharing and reciprocity; and
- healthy connection to and adequate protection for and respect for spiritual sites.

WMFN (together with other Dane-zaa First Nations) state that actions which may adversely affect factors required for the meaningful practice of Treaty 8 rights include:

- increased non-Aboriginal use of the land reducing Aboriginal quiet enjoyment of the land;
- reduced access the land;
- changed migration patterns of wildlife (including barriers to movement);
- decreased health of wildlife populations; and
- reduced confidence in the quality of country foods.

The following assessment adopts the factors identified above as measurable parameters for the assessment of potential Project effects on WMFN Aboriginal and treaty rights and related interests.

20.5.4 Potential Effects on West Moberly First Nations' Aboriginal and Treaty Rights and Related Interests

20.5.4.1 Routes of Access and Transportation

Consultation efforts to date (Section 20.5.1 and Chapter 2) and a review of publicly available information (Section 20.5.3 and Chapter 17) have not identified evidence of WMFN routes of access and transportation within the vicinity of the Project. WMFN has not expressed any specific concerns about potential effects of the Project on its routes of access and transportation.

Potentially affected access and transportation routes include roads, water bodies, and trails. Highway 52 and the Murray River Forest Service Road (FSR) will be used to transport materials and employees to the Project site. The Proponent may need to temporarily close the Murray River FSR during construction to move mine equipment to the Project site. The Proponent will provide advance notice to Aboriginal groups about temporary road closures and also publish notices to advise the public of road closures. With this mitigation, the Project is not expected to adversely affect access to current uses of lands and resources for traditional purposes (Chapter 17). The Project is not expected to impact navigation of the Murray River (Chapter 16, Section 16.7.7.1). The Project is not expected to restrict access along historic and contemporary trails in the vicinity of the Project (Chapter 16, Chapter 19).

Other current and reasonably foreseeable projects in the region have the potential to adversely affect WMFN's routes of access and transportation in the future (Chapter 17: Assessment of Current Use of Lands and Resources for Traditional Purposes Effects, section 17.10; Chapter 21: Federal Cumulative Effects Assessment, section 21.4). However, as the Project is not predicted to adversely affect

WMFN's routes of access and transportation, there is no anticipated difference between WMFN's ability to exercise its rights, with respect to access and transportation, between future conditions with the Project and future conditions without the Project.

20.5.4.2 Water Quality and Quantity

During a May 17, 2013 meeting with the Proponent, WMFN raised a concern that the Project could adversely affect water quantity and quality in the Murray River watershed. During an April 16, 2013 community meeting with WMFN, SFN, and MLIB (facilitated by the three Aboriginal groups' third party reviewer), community members raised concerns about:

- Potential impacts to the water table and underground springs;
- Water withdrawals;
- Quality of water effluent; and
- Potential impacts to the Murray, Pine, Wolverine, and Peace Rivers.

Project activities are predicted to result in water table drawdown, alteration of groundwater flow pattern, and potential reduction of groundwater discharge to the creeks. The effects are not predicted to be significant, as no groundwater wells exist in the underground mine area for water resource supply for human consumption, agriculture or industry usage, and because the predicted change on groundwater discharge into the M20 Camp Creek is relatively small (Chapter 7: Assessment of Groundwater Effects).

Project activities are predicted to result in minor streamflow changes to M17B, M19A, and M20 creeks. Given the minor magnitude, limited geographic extent, and reversibility of the effects, the Project is not expected to result in significant adverse effects to surface water quantity. Project activities are not expected to result in significant adverse effects to water effluent quality in relation to concentrations of total and dissolved metals, nutrients, and chemicals (anions) (Chapter 8: Assessment of Surface Water and Aquatic Resources Effects).

Other current and reasonably foreseeable projects in the region were assessed for their potential to interact with the Project to create cumulative effects on water quality and quantity (Chapter 8: Assessment of Surface Water and Aquatic Resources Effects, section 8.11; Chapter 21: Federal Cumulative Effects Assessment, section 21.7). Streamflow changes in M20 Creek have the potential to interact with streamflow changes induced by activities related to development of the Hermann Mine. The Hermann Mine is located east of the Project and will discharge into M20 Creek. Based on the predictions included in the Hermann Mine Application for an Environmental Assessment Certificate, streamflows at M20 Creek will be increased during the low flow months. The Murray River Project will decrease the low flows at M20 Creek (Section 8.8.1.1). That is, the effects of Murray River Coal and Hermann Mine projects on M20 Creek flows are predicted to be in two opposite directions (decreasing and increasing the low flows, respectively). Therefore, adverse interactions between the two projects are not anticipated and additional mitigation is not required.

No potential interactions with other human actions were identified for Project-related residual effects due to changes in water quantity in M17B and M19A creeks; therefore, no potential

cumulative effects were identified. No potential interactions with other human actions were identified for Project-related residual effects due to changes in water quality and aquatic resources in M19A Creek; therefore, no potential cumulative effects were identified.

On the basis of the above assessment, there is no anticipated difference between WMFN's ability to exercise its rights, with respect to water quantity and quality, between future conditions with the Project and future conditions without the Project.

20.5.4.3 Healthy Populations of Game (Wildlife) in Preferred Harvesting Areas

During a May 17, 2013 meeting with the Proponent, WMFN raised concerns that the Project could adversely affect caribou. During a June 6, 2013 open house with WMFN community members, attendees raised concerns about the potential of the Project to adversely affect the ability of members to hunt elk and to contribute to cumulative effects on water quality and, consequently, wildlife. Attendees noted that the Project's course coal rejects area is a current hunting area and described the Project site in general as 'good elk country.' During an April 16, 2013 community meeting with WMFN, SFN, and MLIB (facilitated by the three Aboriginal groups' third party reviewer), community members raised concerns about:

- Potential impacts to caribou habitat;
- Potential impacts on migration patterns, sensitive lifecycle periods, and health of wildlife; and
- Potential impacts of the Project's conveyor belt on wildlife;

Community members suggested seven wildlife VCs in addition to VCs proposed by the Proponent, including: Little Brown Bat, Gosling Hawk, swans, reptiles (snakes), Wolverine, Green-Throated Warbler, and wildlife health.

The Assessment of Wildlife Effects (Chapter 13) assessed effects of the Project on caribou, moose, mountain goat, elk, grizzly bear, furbearers, bats, raptors, songbirds, waterbirds, and amphibians. The Project is not predicted to result in significant adverse effects to caribou, as caribou are a high elevation species and the Project is located at a low elevation in a valley. Effects on elk are predicted to be negligible, as the Project will result in a relatively small direct and functional (i.e. sensory disturbance-related) loss of habitat and/or disruption to movement. The Project is not predicted to result in significant adverse effects to wildlife health resulting from contamination soil or water contamination (Chapter 18: Assessment of Health Effects). The Project design no longer includes an overland conveyor belt. The Project is not predicted to result in significant adverse effects to human health in relation to the consumption of country foods (Chapter 18: Assessment of Health Effects).

The Project is predicted to adversely affect the migration patterns of moose, grizzly bears and furbearers, due disruption of movement (Chapter 13: Assessment of Wildlife Effects). Mitigation measures proposed by the Proponent include: giving wildlife the right-of-way along access roads and the highway and enforcing speed limits along on-site Project roads. In addition, the Proponent has developed a Wildlife Management Plan (Section 24.12). These measures will minimize disturbance and habitat avoidance (as well as mortality) related to roads, traffic, and noise.

Project-related disruption of moose movement is not predicted to be significant, because the magnitude of the effect will be minor, moose are relatively highly resilient to disturbed and fragmented habitat, moose are common throughout BC, and the effect is reversible. As described in Section 20.5.3, moose is a priority game species for WMFN. However, the Project area is not known to be a primary moose hunting area for WMFN and moose will continue to be available to WMFN hunters within their preferred harvesting areas.

Effects of disruption to grizzly bear movement are predicted to be not significant as grizzly bears have very large home ranges and move across the landscape continuously and have a variety of habitats that they use for movement. The effect will be reversible once operations cease. Grizzly bears are not identified as a priority game species for WMFN (Section 20.5.3). The Project area is not known to be a primary grizzly bear hunting area for WMFN hunters and grizzly bears will continue to be available to WMFN hunters within their preferred harvesting areas.

Effects of disruption of movement on furbearers are predicted to be not significant as some riparian habitat is anticipated to be undisturbed within the Mine Site Assessment Footprint that would continue to allow furbearer movement past the Project area. The effect is reversible over the long term through reclamation activities. The Project area is not known to be a furbearer hunting or trapping location for WMFN (Section 20.5.3). Furbearers will continue to be available in WMFN's preferred hunting and trapping areas.

The Project is predicted to result in adverse effects to moose and furbearers due to habitat loss and alteration (Chapter 13: Assessment of Wildlife Effects). Mitigation measures for moose habitat loss and alteration include: avoidance of important habitat where practical alternatives are available (e.g. habitat loss and alteration was minimized through Project design); maintaining known and potential mineral licks in a natural state; ensuring that ungulates have access to mineral licks during the season when they are most used; avoiding destruction or disruption of areas that contain known wallows, particularly during the ungulate breeding season; and re-vegetation of some reclaimed components during Decommissioning and Reclamation. Mitigation measures of furbearers habitat loss and alteration include: avoidance of important habitat where practical alternatives are available (e.g. habitat loss and alteration was minimized through Project design); no destruction or disruption of active fisher or marten dens during site clearing in the construction phase and during Construction and Operation; and re-vegetation of some reclaimed components during Decommissioning and Reclamation. In addition, the Proponent has developed a Wildlife Management Plan (Section 24.12). These measures will minimize habitat loss and alteration for moose and furbearers. WMFN have not suggested mitigation measures relating to habitat loss and alteration.

Effects of habitat loss on moose are predicted to be not significant. The Project will result in a relatively small habitat loss (1.6% of the high-quality winter and summer habitat in the RSA, and an additional 2.3% affected by subsidence). Habitat loss will be localized in extent and reversible over time. In addition, moose are considered to be resilient to disturbed and fragmented habitat. Effects of habitat loss on furbearers are predicted to be not significant. The loss and alteration of habitat is small enough (equivalent to approximately one female fisher or half a male fisher's home range) to maintain sufficient habitat to support regional furbearer populations. As noted above, WMFN hunters will be able to continue harvesting moose and furbearers in their preferred harvesting areas.

However, should WMFN members harvest moose in the Project area, Project-related adverse effects on moose due to habitat loss and disruption of movement, while not significant, may reduce WMFN moose hunting opportunities in the vicinity of the Project. In addition to limitations on the exercise of Treaty 8 hunting rights associated with the quantity of available resources, the exercise of WMFN's Treaty 8 hunting rights may be affected due to Project-related sensory disturbance at preferred hunting locations and perceived reduction in the quality of harvested resources (Section 17.7).

Other current and reasonably foreseeable projects in the region were assessed for their potential to interact with the Project to create cumulative effects on wildlife (Chapter 13: Assessment of Wildlife Effects, section 13.11; Chapter 21: Federal Cumulative Effects Assessment, section 21.12). The cumulative effects assessment identified residual cumulative effects for moose and grizzly bear. Residual cumulative effects for moose include reduction in available high-quality habitat and reduced movement of moose along the Murray River. The residual cumulative effect for grizzly bear is reduced movement of grizzly bear along the Murray River.

Past and present developments in the RSA have resulted in the loss and alteration of 4.9% and 3.5% of moose habitat, respectively. The Project will remove and alter an additional 0.2% and 0.7% of late winter habitat. Additional future projects will remove and alter an additional 0.9% and 3.1% of moose late winter habitat. The majority of future effects are due to, in decreasing order: wind power projects, oil and gas, and mining. The total area of habitat removed due to all past, present and future activities is 1,178 ha of winter habitat, or 5.9% of the high quality habitat in the RSA. Assuming a moose density of 0.003 moose/ha, this area is equivalent to the home ranges of 3.5 moose.

The cumulative effect on moose habitat is rated as not significant (minor) for the following reasons:

- the cumulative effect will result in a relatively small amount of habitat loss;
- several forms of habitat alteration are beneficial to the moose population;
- the effect is reversible as both forestry and most mining operations are suitable for reclamation post-closure;
- the resiliency of the moose population to disturbed and fragmented habitat is relatively high; and
- moose are common throughout BC.

The distribution of infrastructure along Murray River due to mining and forestry operations was evaluated as a residual cumulative effect on the disruption of movement of moose north and south through the Murray River corridor. The Wolverine River corridor will be relatively unaffected by the Project, with the exception of rail traffic twice a day. The combination of all past, present and future activities on the Murray River Resource Management Zone (MRRMZ) will result in the removal of 9.8% (155 ha) of winter habitat and the further alteration of an additional 14.2% (224 ha) of habitat.

The cumulative effect of disruption of moose movement is assessed as not significant (minor) for the following reasons:

- the residual effect of disruption of moose movements is expected to have a minor magnitude;
- the effect will be reversible long term because of reclamation activities of development areas along the Murray River;
- the resiliency of the moose population to disturbed and fragmented habitat is relatively high;
- moose are common throughout BC.

Currently, 11.2% of grizzly bear spring habitat has been lost in the MRRMZ, largely due to transportation corridors and 34.3% has been altered, largely by forestry. The addition of the Murray River project would remove an additional 2.3% and alter an additional 1.2% of spring habitat for grizzly bears in the MRRMZ. Additional future projects, largely oil and gas, may cause the loss and alteration of an additional 3.4% and 6.7% of spring habitat for a total of 17% lost and 42% altered. Note that the altered habitat is largely forestry cutblocks and pipeline rights of way, which grizzly bears may use to forage or movements (Nielsen et al. 2004).

The cumulative effect of disruption to grizzly bear movement is assessed as not significant (moderate) for the following reasons:

- Due to the relatively high proportion of habitat lost and altered in the MRRMZ, the magnitude of the effect is rated as medium. However, this effect is mitigated, to some degree, by the movement habits of grizzly bears. Bears have very large home ranges and move across the landscape continuously and have a variety of habitats that they use for movement, including riparian, mid elevation and alpine;
- It is not expected that this effect will have local or regional population-scale effects; and
- The effect will be reversible in the long-term once the projects end. Bears may temporarily avoid habitats where there is a barrier to their movement, but are expected to re-occupy the habitat once the disturbance is removed.

While residual cumulative effects on moose and grizzly bear are predicted to be not significant (minor), the exercise of WMFN's treaty rights with respect to the quantity of populations of game may differ between future conditions with the Project and future conditions without the Project, should WMFN members hunt in the vicinity of the Project

In addition, other foreseeable future mining, hydroelectric, and other commercial activities, such as oil and gas exploration have the potential to act cumulatively with the Project by adding to the visual and auditory changes in the LSA. This is a spatial/temporal crowding effect in that it reduces the number of hunting and trapping locations in the LSA considered to be free of auditory or visual disturbances (Section 17.10.2.6). Other foreseeable future mining, hydroelectric, and other commercial activities, such as oil and gas exploration, also have the potential to act cumulatively with the Project by reducing the number of wildlife harvesting areas thought to be free of contamination by Aboriginal groups. This is a nibbling loss effect in that it contributes incrementally to perceived contamination of country foods (Section 17.10.2.6).

Consequently, the exercise of WMFN's Treaty 8 hunting rights with respect to the experience of the environment while hunting and perceived quality of harvested resources may differ between future conditions with the Project and future conditions without the Project.

The Proponent will implement the following mitigation measures to minimize the above effects:

- work with Aboriginal groups to facilitate their participation in ongoing monitoring, during pre-mine, during construction and operations, and post-mine periods.
- work to maintain Aboriginal groups' continuity of use via ongoing monitoring to prevent the creation of 'avoidance areas' for Aboriginal peoples.
- engage in ongoing communication with Aboriginal groups, including translation of technical reports for Aboriginal membership

20.5.4.4 Healthy Populations of Game (Fish) in Preferred Harvesting Areas

During an April 16, 2013 community meeting with SFN, WMFN, and the MLIB (facilitated by the three Aboriginal groups' third party reviewer), community members raised concerns about:

- Potential changes in water quantity and quality and subsequent impacts to fish habitat;
- Impacts on spawning; and
- Health impacts from eating contaminated fish.

Project activities are predicted to result in minor streamflow changes to M17B, M19A, and M20 creeks. Given the minor magnitude, limited geographic extent, and reversibility of the effects, the Project is not expected to result in significant adverse effects to surface water quantity (Chapter 8: Assessment of Surface Water and Aquatic Resources Effects). Project activities are not expected to result in significant adverse effects to water effluent quality (Chapter 8: Assessment of Surface Water and Aquatic Resources Effects). The Project will minimize discharge of contact water into the environment and implement a number of environmental management plans, including:

- Water Management Plan (Section 24.6);
- Metal Leaching and Acid Rock Drainage Management Plan (Section 24.7);
- Selenium Management Plan (Section 24.10);
- Erosion and Sediment Control Plan (Section 24.5);
- Subsidence Management Plan (Section 24.16); and
- Air Quality and Dust Control Plan (Section 24.2).

The Assessment of Fish and Fish Habitat Effects (Chapter 9) included Arctic Grayling as a VC in response to Aboriginal groups' suggestions during the April 2013 community meeting. The Project is not expected to affect fish through the introduction of contaminants (chemicals, nitrogeneous compounds, or petroleum products) into water bodies. The Project is not predicted to adversely affect fish and fish habitat due to direct mortality, erosion and sedimentation, change in water quality, or habitat loss associated with stream crossings and infrastructure (Chapter 9: Assessment of Fish and Fish Habitat Effects).

Measures proposed by the Proponent to mitigate any potential Project effects on fish (in addition to water quality control) include:

- adhering to appropriate fisheries operating windows for fish-bearing streams;
- minimizing the potential for spills into fish-bearing streams;
- protecting fish habitat near project infrastructure; and
- adhering to all regulations and best-practices.

Water quality modelling undertaken for the Project did not predict that Project-related changes, including dust deposition, would increase concentrations of contaminants above water quality guideline thresholds (for contaminants currently below guideline thresholds). Consequently, no effects to the quality of terrestrial country foods are predicted, and no effects to human health are predicted (Chapter 18: Assessment of Health Effects).

No residual effects to fish and fish habitat as a result of the Project are predicted (Chapter 9). Consequently, the Project is not expected to contribute to cumulative effects to fish and fish habitat (Chapter 9). Given that no residual cumulative effects are predicted, the exercise of WMFN's Treaty 8 rights with respect to healthy populations of fish are not expected to differ between future conditions with the Project and future conditions without the Project.

20.5.4.5 Cultural and Spiritual Relationships with the Land

A review of publically-available information indicates that WMFN' land-based cultural and spiritual activities include members' attachment to specific cultural and spiritual places, seasonal hunting and camping trips (culture camps), and hunting, trapping and fishing in general (Treaty 8 First Nations Community Assessment Team and The Firelight Group Research Cooperative 2012). Other cultural and spiritual practices include spirit quests, the collection of tangible and intangible 'medicines', transmission of traditional knowledge and skills between generations, retention of place names, and gathering and ceremony in spiritually-significant areas. Areas used to gather medicinal plants and materials used in cultural ceremonies, crafts and other goods include the Peace Moberly Tract, Stewart Lake, and upper Moberly River (West Moberly First Nations 2012).

WMFN have not raised any concerns about potential effects of the Project on the Nations' spiritual and cultural places and practices.

The Project is not predicted to adversely affect WMFN members' access to lands and resources for resource harvesting or cultural and spiritual practices (Chapter 17: Assessment of Current Use of Lands and Resources for Traditional Purposes Effects). Consequently, the Project is not expected to adversely affect WMFN language retention in relation to important place names or cultural transmission associated with particular places and practices.

Given that the Project is not expected to affect WMFN's members' access to lands and resources for resource harvesting or cultural and spiritual practices, the exercise of WMFN's Treaty 8 rights with respect to cultural and spiritual relationships with the land is not expected to differ between future conditions with the Project and future conditions without the Project.

20.5.4.6 Abundant Berry Crops in Preferred Harvesting Areas

Consultation efforts to date (Section 20.5.1 and Chapter 2) and a review of publicly available information (Section 20.5.3 and Chapter 17) does not indicate that WMFN members harvest berries in the vicinity of the Project, as assessed in relation to the LSA for the Assessment of Terrestrial Ecosystem Effects (Chapter 11, Figure 11.6-1).

During an April 16, 2013 community meeting with WMFN, SFN, and MLIB (facilitated by the three Aboriginal groups' third party reviewer), community members raised concerns about potential impacts of Project-related contaminants on plant health. Members suggested "plant health" as a VC.

The Project is predicted to result in residual adverse effects to harvestable plants within the Project footprint due to the removal of ecosystems that support harvestable plants, the alteration of cleared sites' ability to provide habitat for harvestable plants, and subsidence effects (Chapter 11: Assessment of Terrestrial Ecosystem Effects). Mitigation measures will include:

- limiting the extent of vegetation clearing during Construction activities to the required minimum. During Construction soil will be stripped and stockpiled for future reclamation. This process will continue on a smaller scale during Operation to match the expanding footprint of the Coarse Coal Reject storage facilities;
- minimizing soil degradation (i.e., erosion) by salvaging soil during appropriate weather conditions, transporting to stockpiles in a timely manner, and establishing and implementing erosion control procedures early during the salvage process;
- carrying out dust suppression on roads to prevent fugitive dust from impacting plants and soils;
- promptly re-vegetating exposed soil surfaces during the appropriate growing season and conditions using seeds (and/or plants) suitable for the local area and ecosystems to avoid erosion and sedimentation, introduction of invasive plants, and to facilitate the re-establishment of ecological functions in the affected areas;
- providing appropriate education and training for employees and contractors outlining how to minimize effects on ecosystems, soils, and vegetation. This information will be prepared and made available to all employees on-site (e.g., through the Project Safety Office or other designated location) in the form of fact sheets and/or handbooks; and
- conducting follow up monitoring of cleared sites to monitor erosion and sediment control.

The potential loss and alteration of harvestable plants is not predicted to be significant, primarily due to the limited magnitude and extent of ecosystem removal caused by Project site clearing.

Other current and reasonably foreseeable projects in the region were assessed for their potential to interact with the Project to create cumulative effects on terrestrial ecosystems (Chapter 11). The assessment predicts a cumulative residual effect of loss or alteration of harvestable plant quantity or quality for harvestable plants. The cumulative loss and alteration to harvestable plant habitat is difficult to accurately characterize because the location, type and quantity of harvestable plants within the region is unknown. Many of the ecosystems within the region can provide suitable

habitat for harvestable plants and as such harvestable plant habitat was assessed in relation to effects on forested ecosystems. However, the effects to harvestable plant habitat are expected to be considerably less in extent than the loss and alteration reported for forested ecosystem. Furthermore, in certain cases, human derived alteration will increase the amount of harvestable plant habitat.

Loss and alteration of harvestable plants are considered not significant (Chapter 11). The magnitude of the direct effects to harvestable plants is considered moderate because although 33.7% of the available habitat could be lost or altered by cumulative effects, some of the human derived alteration will increase the amount of harvestable plants. Development activities such as timber harvesting can favour berry production by increasing the light available to plants and by reducing competing vegetation. Other cumulative effects to harvestable plants include nibbling loss of relevant habitat, physical transport of invasive plant propagules, spatial and temporal crowding in areas where multiple project effects intersect with harvestable plant habitat as well as additive effects from the accumulation of metals in some soils and subsequent plant uptake as well as growth inducing effects due to the creation of new edges. All of the effects are considered regional in extent and reversible in the long term. The duration of effects are expected to occur over the medium to long term depending on the relevant plant and its associated habitat requirements. In an ecological context, harvestable plants are considered neutral as they have some unique attributes, particularly to the local communities (discussed further in Chapter 16, Land Use). There is a medium level of confidence in the analyses because the effects to harvestable plants are generally well understood; however, uncertainty exists regarding the magnitude of alteration.

Current information does not indicate that the Project footprint is a preferred berry harvesting site for WMFN members. Given that the Project is not expected to adversely affect harvestable plants in WMFN's preferred harvesting areas, the exercise of WMFN's Treaty 8 rights with respect to berry crops in preferred harvesting areas is not expected to differ between future conditions with the Project and future conditions without the Project.

20.5.4.7 Traditional Medicines in Preferred Harvesting Areas

"Medicine" in Dane-zaa culture refers both to spiritual powers bestowed upon hunters by animals through encounters in spirit quests and dreams (Jenness 1937; R. Ridington 1988, 1990) and to spiritual and healing powers associated with particular plants (West Moberly First Nations Land Use Department 2009). This section assumes that the requirement for "traditional medicines in preferred harvesting areas" refers to medicinal plants.

Consultation efforts to date (Section 20.5.1 and Chapter 2) and a review of publicly available information (Section 20.5.3 and Chapter 17) does not indicate that WMFN members harvest medicinal plants in the vicinity of the projects, as assessed in relation to the LSA for the Assessment of Terrestrial Ecosystem Effects (Chapter 11, Figure 11.6-1).

During an April 16, 2013 community meeting with WMFN, SFN, and MLIB (facilitated by the three Aboriginal groups' third party reviewer), community members raised concerns about potential impacts of Project-related contaminants on plant health. Members suggested "plant health" as a VC.

As described in Section 20.5.5.5 and Chapter 11, the Project is not predicted to result in significant adverse effects to harvestable plants.

Other current and reasonably foreseeable projects in the region were assessed for their potential to interact with the Project to create cumulative effects on terrestrial ecosystems (Chapter 11). The assessment predicts a cumulative residual effect of loss or alteration of harvestable plant quantity or quality for harvestable plants. The cumulative loss and alteration to harvestable plant habitat is difficult to accurately characterize because the location, type and quantity of harvestable plants within the region is unknown. Many of the ecosystems within the region can provide suitable habitat for harvestable plants and as such harvestable plant habitat was assessed in relation to effects on forested ecosystems. However, the effects to harvestable plant habitat are expected to be considerably less in extent than the loss and alteration reported for forested ecosystem. Furthermore, in certain cases, human derived alteration will increase the amount of harvestable plant habitat.

Loss and alteration of harvestable plants are considered not significant (Chapter 11). The magnitude of the direct effects to harvestable plants is considered moderate because although 33.7% of the available habitat could be lost or altered by cumulative effects, some of the human derived alteration will increase the amount of harvestable plants. Development activities such as timber harvesting can favour berry production by increasing the light available to plants and by reducing competing vegetation. Other cumulative effects to harvestable plants include nibbling loss of relevant habitat, physical transport of invasive plant propagules, spatial and temporal crowding in areas where multiple project effects intersect with harvestable plant habitat as well as additive effects from the accumulation of metals in some soils and subsequent plant uptake as well as growth inducing effects due to the creation of new edges. All of the effects are considered regional in extent and reversible in the long term. The duration of effects are expected to occur over the medium to long term depending on the relevant plant and its associated habitat requirements. In an ecological context, harvestable plants are considered neutral as they have some unique attributes, particularly to the local communities (discussed further in Chapter 16, Land Use). There is a medium level of confidence in the analyses because the effects to harvestable plants are generally well understood; however, uncertainty exists regarding the magnitude of alteration.

Current information does not indicate that the Project footprint is a preferred traditional medicinal plant harvesting site for WMFN members. Given that the Project is not expected to adversely affect harvestable plants in WMFN's preferred harvesting areas, the exercise of WMFN's Treaty 8 rights with respect to traditional medicines in preferred harvesting areas is not expected to differ between future conditions with the Project and future conditions without the Project.

20.5.4.8 Experiences of Remoteness and Solitude on the Land

Consultation efforts to date (Section 20.5.1 and Chapter 2) and a review of publicly available information (Section 20.5.3 and Chapter 17) have not identified information about WMFN members' current experiences of remoteness and solitude on the land when exercising Treaty 8 rights.

During an April 16, 2013 community meeting with WMFN, SFN, and MLIB (facilitated by the three Aboriginal groups' third party reviewer), community members raised concerns about potential noise and visual/aesthetic effects associated with the Project. A review of publically-available

information revealed that WMFN (together with other Dane-zaa) consider that increased non-Aboriginal recreational users and hunters on the land can decrease enjoyment of solitude on the land (Treaty 8 First Nations Community Assessment Team 2012; Treaty 8 First Nations Community Assessment Team and The Firelight Group Research Cooperative 2012).

WMFN members consider the Project footprint to be good elk country (Section 17.4.6.2). Should WMFN members undertake hunting activities in the vicinity of the Project, they could experience reduced quality of hunting and trapping experience due to noise and visual changes in the LSA (Section 17.7).

The Proponent will implement a noise management plan (Section 24.3) to mitigate potential noise effects, and will work with individuals as appropriate to address specific noise concerns that may arise.

Visual effects are not anticipated at lower elevations as Project infrastructure is mostly shielded by vegetation, and the Project will be required to follow Visual Quality Objectives outlined in the Dawson Creek LRMP (Chapter 17: Current Use of Lands and Resources for Traditional Purposes Effects). Exceedances of dust deposition will only occur within one kilometre of the Murray FSR and Highway 52, and only for six months out of the year (see Chapter 6: Assessment of Air Quality Effects). Mitigation measures for fugitive dust suppression include wetting work areas, roads, and storage piles, installing covers to equipment and loads carried by vehicles, installing windbreaks or fences, and using dust hoods and shields. Harvesters may be able to view the Coal Processing Site at higher elevations, especially on the east side of the Murray River where views are unobstructed due to past logging activity (Visual Quality Baseline, Appendix 16-C). WMFN members are not known to hunt in that area.

The Project will not create new access to hunting areas for non-Aboriginal hunters, as it will utilize existing transportation and access routes.

Other current and reasonably foreseeable projects in the region were assessed for their potential to interact with the Project to create cumulative effects on quality of experience of the natural environment (Chapter 17). The assessment identified a residual cumulative effect for quality of experience for Aboriginal harvesters. Auditory and visual effects of the Project are expected to interact with similar effects from adjacent projects, including the Quintette Coal Loadout and the Trend Mine Washing Plant and Coal Loadout.

The residual cumulative effect is expected to be not significant (minor) for the following reasons:

- The Project has a relatively small footprint and underground workings, resulting in a minor contribution to visual and auditory cumulative effects; and
- Effects will be reversible upon decommissioning and reclamation.

Given the Project may affect WMFN members' experience of remoteness and solitude, should they choose to hunt in the vicinity of the Project, and given that Project activities are expected to incrementally add to cumulative effects on the quality of experience of the natural environment, the exercise of WMFN's Treaty 8 rights with respect to feelings of remoteness and solitude may differ between future conditions with the Project and future conditions without the Project.

20.5.4.9 Feelings of Safety and Security

Consultation efforts to date (Section 20.5.1 and Chapter 2) and a review of publicly available information (Section 20.5.3 and Chapter 17) did not provide information about WMFN members' current feelings of safety and security while exercising their Aboriginal and treaty rights and related interests in the vicinity of the Project.

During an April 16, 2013 community meeting with WMFN, SFN, and MLIB (facilitated by the three Aboriginal groups' third party reviewer), community members raised concerns about personal security associated with the influx of non-local people.

A review of publically-available information revealed that WMFN associate declines in safety and security with increased presence of non-Aboriginal hunters and increased traffic. Key concerns include fear of accidental shooting, feelings of being unwelcome, and encounters with industrial vehicles and equipment moving along access roads (Treaty 8 First Nations Community Assessment Team and The Firelight Group Research Cooperative 2012).

The Project will not create new access to hunting areas for non-Aboriginal hunters, as it will utilize existing transportation and access routes. B.C. residents who wish to obtain a resident hunter number card and hunting licence are required to complete the Conservation Outdoor Recreation Education (CORE) program, which includes instruction on firearm safety. Non-resident hunters must be accompanied by a registered guide outfitter or accompanied by a resident who holds a Permit to Accompany. The Proponent will mitigate potential effects on Aboriginal groups' feelings of safety and security by: informing all employees and contractors of appropriate conduct with Aboriginal peoples and enforcing speed limits along all access roads.

The Project is not expected to result in an influx of non-Aboriginal hunters. Consequently, the exercise of WMFN Treaty 8 rights with respect to feelings of safety and security are not expected to differ between future conditions with the Project and future conditions without the Project.

20.5.4.10 Lands and Resources Available within Constraints of Time and Cost

Consultation efforts to date (Section 20.5.1 and Chapter 2) and a review of publicly available information (Section 20.5.3 and Chapter 17) has not provided information about WMFN's time and costs required to access lands and resources.

A review of publically-available information reveals that travel to harvesting sites and expenses associated with hunting supplies and water are key determinants of time and cost (Treaty 8 First Nations Community Assessment Team and The Firelight Group Research Cooperative 2012).

WMFN have not raised concerns about the potential effects of the Project on the time and cost required for members' to access lands and resources. WMFN have not suggested VCs with respect to time and cost.

The Project is not expected to adversely affect WMFN routes of access and transportation (Section 20.5.5.1). The Project is not expected to adversely affect to the quantity or quality of game in WMFN preferred harvesting sites (Section 20.5.5.3), the quantity or quality of plants harvested by WMFN (Section 20.5.5.5 and 20.5.5.6), or the quantity or quality of fish harvested by WMFN (Chapter 17: Assessment of Current Aboriginal Use Effects). The Project is not predicted to significant adverse effects to water quality (Section 20.5.5.2).

Given that the Project is not predicted to adversely affect WMFN's routes of access and transportation or quantity and quality of resources in preferred harvesting areas, the exercise of WMFN's Treaty 8 rights with respect to availability of lands and resources within constraints of time and cost are not expected to differ between future conditions with the Project and future conditions without the Project.

20.5.4.11 Socio-Cultural Institutions for Sharing and Reciprocity

Available information indicates that Dane-zaa hold strong and long-standing values and practices relating to sharing. Sharing can relate to harvested resources, emotions, and tasks such as child-rearing. This section addresses sharing as related to resources acquired through harvesting. Traditionally, harvested animals would be shared with each family in a group. Sharing of benefits is considered by WMFN (and other Dane-zaa) as a key measure of the good life. Sharing is considered to be important to WMFN (together with other Dane-zaa) as it serves to support social cohesion, values retention, and community relations (Treaty 8 First Nations Community Assessment Team and The Firelight Group Research Cooperative 2012).

WMFN have not raised any concerns about the potential effects of the Project on its members' sharing practices. WMFN have not suggested any VCs related to sharing practices for inclusion in the Application/EIS.

The Project could affect WMFN' sharing practices by interfering with members' ability to harvest shareable resources. As described in Section 20.6.4.3

The Project is not expected to adversely affect WMFN's ability to harvest shareable resources (sections 20.5.5.3, 20.5.5.5, 20.5.5.6, and Chapter 17).

Given that the Project is not expected to adversely affect WMFN's ability to harvest shareable resources, the exercise of WMFN's Treaty 8 rights with respect to socio-cultural institutions for sharing and reciprocity are not expected to differ between future conditions with the Project and future conditions without the Project.

20.5.4.12 Healthy Connection to and Adequate Protection for and Respect for Spiritual Sites

The Project's potential to affect WMFN's Aboriginal and treaty rights and related interests with respect to spiritual sites is addressed in Section 20.5.5.4.

20.5.5 Summary of Residual Effects on West Moberly First Nations' Aboriginal and Treaty Rights and Related Interests

The exercise of WMFN's treaty rights with respect to the quantity of populations of game may differ between future conditions with the Project and future conditions without the Project, should WMFN members hunt in the vicinity of the Project. In addition, the exercise of WMFN's Treaty 8 hunting rights with respect to the experience of the environment and feelings of remoteness and solitude while hunting and perceived quality of harvested resources may differ between future conditions with the Project and future conditions without the Project, should WMFN members hunt in the vicinity of the Project.

20.6 EFFECTS ASSESSMENT FOR SAULTEAU FIRST NATIONS

20.6.1 Consultation with Saulteau First Nations

20.6.1.1 Engagement Activities Undertaken by the Proponent

The Proponent began consulting with SFN with respect to the Project and SFN's Aboriginal and treaty rights and related interests upon acquiring the Murray River coal property in 2009. Consultation has consisted of a number of face-to-face meetings, correspondences, and site visits. The Proponent has engaged in discussions with SFN on economic development and protocol agreements and discussions are continuing. The consultation record is described and documented in Chapter 2: Information Distribution and Consultation.

To assist SFN's capacity to participate in the EA process, in April 2013, the Proponent agreed to fund a third party technical review of the Application/EIS, conducted by Pottinger-Gaherty Ltd. (PGL) on behalf of the WMFN, SFN, and MLIB. The third party review process provides an independent review of the technical issues associated with the Project and provides an opportunity to identify and resolve First Nations' concerns and issues. To date, PGL has: 1) held a community scoping meeting with the three First Nations to identify issues of concern; 2) provided the Proponent with a summary of issues, concerns and interests arising from the community scoping meeting; 3) provided comments on the Project's dAIR; 4) participated in Working Group meetings; 5) commenced technical review of Project baseline reports; and 6) provided comments on the EIS Guidelines.

The Proponent distributed a desk-based ethnographic research report (Appendix 17-B) to SFN on November 1, 2012 for its review and comment and offered to undertake traditional knowledge and traditional use studies at that time. The Saulteau First Nations Knowledge and Use Study was completed on April 28, 2014 and is appended to the Application/EIS (Appendix 17-B). The Proponent met with SFN Land and Sustainable Resource Management Department on May 21, 2014 to review the study findings and to discuss how to integrate them into the Application/EIS.

The Proponent wrote to SFN On April 25, 2014 to provide members with a plain language summary of the proposed Project and to summarize the types of information that will be included in the Application/EIS. The latter document outlined the Proponent's understanding of SFN's Aboriginal and treaty rights and related interests as related to the Project, issues and concerns raised by SFN with respect to the Project, valued components of potential interest to SFN, and the Proponent's proposed approach to assess potential impacts of the Project on SFN's Aboriginal and Treaty rights and related interests. To date, SFN has not provided a response to the Proponent.

The Proponent will continue engage with SFN throughout the Application/EIS review period as outlined in the First Nations Consultation Plan and Chapter 2. The Proponent will continue to seek information from SFN about Aboriginal and treaty rights and related interests that may be impacted by the Project and means to avoid, mitigate, or otherwise accommodate any potential impacts.

20.6.1.2 Overview of Saulteau First Nations' Comments and Concerns

SFN has raised the following key concerns about the Project:

- Potential effects on hunting, fishing, trapping, and gathering;
- Potential effects on caribou and other wildlife;
- Potential effects on water use and water quality;
- Potential effects on fish and fish habitat;
- Potential effects on plant health;
- Potential effects on spiritual and ceremonial sites; and
- Potential effects related to noise and visual/aesthetic quality.

A detailed list of SFN's comments and concerns, and the Proponent's responses, are located in Appendix E of Chapter 2. Issues and concerns that specifically relate to SFN's Aboriginal and treaty rights and related interests are identified within each assessment topic in Section 20.6.4.

20.6.1.3 Responses Provided by the Proponent

During meetings and through correspondence, the Proponent provided SFN with further information about the Project, including how the Project design will minimize wildlife habitat effects by creating a small footprint relative to open-pit mining works, utilizing already disturbed land, and using existing access roads. The Proponent informed SFN of its decision to make a substantial change from an approximately four kilometre overland conveyor that would cross Murray River to a second underground decline under Murray River, and how this change will reduce potential effects to wildlife mobility associated with linear developments, fish habitat, and archaeological sites. In response to SFN's and other Aboriginal groups' comments, the Proponent made a number of changes to the Project's draft Application Information Requirements, including: modification of fish and fish habitat VCs to be more inclusive of all potential fish species, including Arctic Grayling; adding dust deposition to a list of contaminants; expanding the spatial extents of the groundwater model; inserting of a description of wetland functions to be assessed; and including of bullet point indicating the exposure to contaminants will be assessed as a potential effect to wildlife VCs.

A detailed list of SFN's comments and concerns, and the Proponent's responses, are located in Appendix E of Chapter 2. Section 20.6.4 provides a detailed assessment of the potential Project effects on WMFN's Aboriginal and treaty rights and related interests.

20.6.1.4 Future Planned Engagement Activities

The Proponent will continue engage with SFN throughout the Application/EIS review period as outlined in the First Nations Consultation Plan, Chapter 2 of the Application/EIS, and the scope of the third party review process provided to the Proponent by PGL. Planned engagement activities with WMFN include:

- Responding to technical comments on the Application/EIS submitted to the Proponent by SFN's third party technical reviewer (PGL);
- Arranging teleconferences with SFN's third party technical review (PGL) to resolve outstanding technical issues;
- Arranging higher level workshops with SFN to discuss and resolve issues that cannot be resolved at the technical level;
- Responding to SFN's formal comments on the Application/EIS; and
- Arranging meetings with SFN to discuss potential adverse effects of the Project on SFN's Aboriginal and treaty rights and related interests, if any, and proposed mitigation measures.

20.6.2 Baseline Conditions

20.6.2.1 Traditional Territory and Reserves

The SFN community situated on one reserve, East Moberly Lake 169, which covers 3,025.8 hectares. The reserve is located in the northern foothills of the Rocky Mountains, along the east end of Moberly Lake and near the Peace River Plateau, approximately 100 km southwest of Fort St. John and 25 km north of Chetwynd (Figure 20.3-1).

SFN adhered to Treaty 8 when Saulteau members accepted treaty annuities at Moberly Lake in 1914. SFN does not define a traditional territory within Treaty 8 lands. SFN also has a shared interest with WMFN in the Area of Critical Community Interest.

20.6.2.2 Ethnography and Language

SFN members are of Saulteaux, Cree and Dunne Zaa descent. The use of "Nations" in the Saulteau First Nations name is in recognition of mixed ancestry (PRCI 2010). Cree is now the most common Aboriginal language spoken at SFN, and only a few elders continue to speak the Saulteau language. English is the primary spoken language.

20.6.2.3 Population and Governance

SFN has a total registered population of 894 members with 357 members living on reserve (AANDC 2014b). Off-reserve members live in the nearby towns of Chetwynd, Prince George and Fort St. John, with some members residing in larger cities, including Vancouver and Kamloops. Off reserve members often return to the community to take part in community events and gatherings (Fasken Martineau 2013).

SFN is governed under a traditional Chief and Headmen custom electoral system. A Chief and four Councillors each represent one of the five founding SFN families. Each family nominates a leader who becomes a Councillor, and then the general membership elects a Chief from among these five family heads. Elections are held every three years (Finavera 2011).

20.6.2.4 Economy

SFN engages in a mixed subsistence and market economy. SFN members derive a substantial portion of their household subsistence needs from local hunting and trapping (Fasken Martineau 2013). In addition, SFN engages in a number of market-based economic activities.

SFN hold a number of benefit-sharing agreements with industry and governments associated with resource extraction in SFN traditional territory. These agreements provide income to the band and some training and employment opportunities for members. A number of SFN members operate businesses on and off reserve, including Three Nations Ventures, Six Nations Ventures, and 4 Evergreen Resources (Fasken Martineau 2013). Most on-reserve SFN members are employed in public administration and construction, with others employed in mining, quarrying and oil and gas extraction, manufacturing, transportation and warehousing, retail trade, and community services. The on-reserve SFN unemployment rate is approximately 18% (Statistics Canada 2013a).

20.6.2.5 Land Use Setting and Planning

SFN places economic, cultural and social importance on the use of lands and resources (Sunderman and Lions Gate Consulting Inc. 2013). The community establishes yearly hunting, trapping and gathering camps. Many SFN people utilize these camps to engage in traditional activities and to pass traditional knowledge to youth (Finavera 2011).

SFN, together with WMFN and BC, developed a draft Sustainable Resource Management Plan (SRMP) for the Peace Moberly Tract in 2006 (BC, SFN, and WMFN 2006).

20.6.2.6 Summary of Saulteau First Nations Treaty Rights

SFN adhered to Treaty 8 in 1914, establishing treaty rights to hunt, trap, and fish in its traditional land use areas within Treaty 8. SFN describes Treaty 8 as a peace treaty which secured rights to continue using their traditional territory (Appendix 17-B: Saulteau First Nations Knowledge and Use Study). SFN consider their treaty rights to include "fishing, hunting, and trapping rights within their traditional territories. In addition, the Treaty rights include the use of the land for gathering, ceremonial and spiritual purposes and to carry on their mode of life" (Sunderman and Lions Gate Consulting Inc. 2013). SFN draw on promises made by the Crown at the time of signing the treaty to imply that the treaty ensures the continuation of SFN's "way of life" as it existed at the time of signing the treaty (Appendix 17-B: Saulteau First Nations Knowledge and Use Study).

SFN highlight the following basic aspects of Treaty 8 rights, from their perspective (BC, SFN, and WMFN 2006; Olson, Bates, and The Firelight Group Research Cooperative 2014):

- Aboriginal and Treaty rights are protected under Section 35 of the Federal *Constitution Act* (1982) which states that existing aboriginal and treaty rights are recognized and affirmed.

- The Supreme Court of Canada emphasizes the significance of constitutional protection and points out that this places limits on government decision-making. This constitutional protection ("a strong check on legislative power") often requires treating First Nations and their members in a different manner than non-aboriginal people or third parties.
- Aboriginal and Treaty rights are priority rights. This means that First Nations have first priority to fish and wildlife resources once conservation needs have been met.
- The Supreme Court of Canada has also confirmed that fishing and hunting rights include a right of access and confirmed that these rights include a right to pass on the culture to younger generations.
- Aboriginal and Treaty rights are not limited to the actual practice of fishing and hunting. For example, the courts have stated that aboriginal and treaty hunting and fishing rights include incidental rights to build structures such as hunting camps and smoke houses.
- The Crown's ability to sell land and authorize incompatible uses is limited. It cannot be exercised in a manner that neuters the hunting and fishing and other rights guaranteed by Treaty 8.
- First Nations have a right to fish and hunt in their preferred location and in reasonable proximity to where they live. It is not acceptable for the Crown to authorize industrial activity and displace hunting and fishing rights in preferred locations of First Nations by relying on the theory that the First Nation members can always fish or hunt elsewhere in the Territory.
- Treaty 8 promises more than just the right to hunt, fish, and trap, but also promises "continuity in traditional patterns of economic activity" Mikisew Cree First Nation v Canada (Minister of Canadian Heritage), 20005 SCC at para 47)
- Treaty 8 protects the right of its signatories to practice a historic mode of life (West Moberly First Nations v British Columbia (Chief Inspector of Mines), 2011 BCCA 247 at paras 130 and 137)
- Treaty 8 rights are not frozen in time (R v Marshall, 1999 3 SCR 456 at para 78) meaning that signatories have a right to maintain a livelihood from their lands, waters and resources by modern means while sustaining their use for future generations.

SFN consider their treaty rights to apply throughout all of Treaty 8 territory (BC, SFN, and WMFN 2006; Olson, Bates, and The Firelight Group Research Cooperative 2014).

20.6.2.7 Past, Present and Anticipated Future Uses of the Project Area by Saulteau First Nations

Upon relocating to the Peace River valley in the early 20th Century, Saulteaux established a hunting and trapping economy based on a seasonal round, with moose constituting the most important game resource (Nesoo Watchie Resouce Management 2011). Saulteaux peoples also hunted and trapped elk, deer, mountain goat, caribou, grouse and rabbits (Appendix 17 B; Weinstein 1979). Furbearing mammals, including lynx, beaver, and marten, were also trapped (Appendix 17 B). Saulteaux historically hunted and trapped the lands south of the Peace River, and east of the Rocky Mountains (Leonard 1995). This area includes lands within the Murray River and Sukunka River watersheds, as well as northward within the Kiskatinaw River watershed to the Peace River (TMW 2009). In addition

to hunting, trapping, and fishing, Saulteaux peoples gathered plants and fungi for subsistence, medicinal, and spiritual purposes (Appendix 17 B). The Saulteaux seasonal round included winter hunting (moose, caribou, deer), fishing, and trapping in the Rocky Mountain foothills. Spring included trading furs at Chetwynd or Hudson's Hope, followed by the spring beaver and muskrat hunt. Summer was typically spent around Moberly Lake. Saulteaux typically harvested whitefish, pike, lake trout and other fish during the summer months (Weinstein 1979). The fall included an intensive moose hunt to provision dry meat for the winter. Following the fall moose hunt, families dispersed to family-held traplines.

SFN continue to engage in traditional land uses, including hunting, trapping, fishing, and gathering (Sunderman and Lions Gate Consulting Inc. 2013). According to a recent survey (UNBC, UM, and AFN 2011), 47% of SFN members hunt and trap for food. SFN's hunting, fishing, and trapping activities primarily take place north of the SFN reserve and south of the Peace River within the Pine and Moberly River watersheds, and in the Sukunka River, Murray River, and Boucher Lake areas. Harvesting activities are concentrated in areas where target resources are obtainable, within the vicinity of camps or cabins, within traplines owned by SFN members, and where roads, trails, or other routes provide access (Traditions Consulting Services 2013b).

Key hunting areas include: Pine River, Moberly River, Cameron Lakes, Boucher Lake and Monias Lake (Traditions Consulting Services 2013c; Figure 20.6-1). Target species harvested at these locations include (in descending order of frequency): moose, elk, deer, black bear, grizzly bear, brown bear, mountain goat, and caribou. Bird species harvested by SFN members include: grouse, waterfowl, and bald eagles (or eagle feathers) (Traditions Consulting Services 2013b).

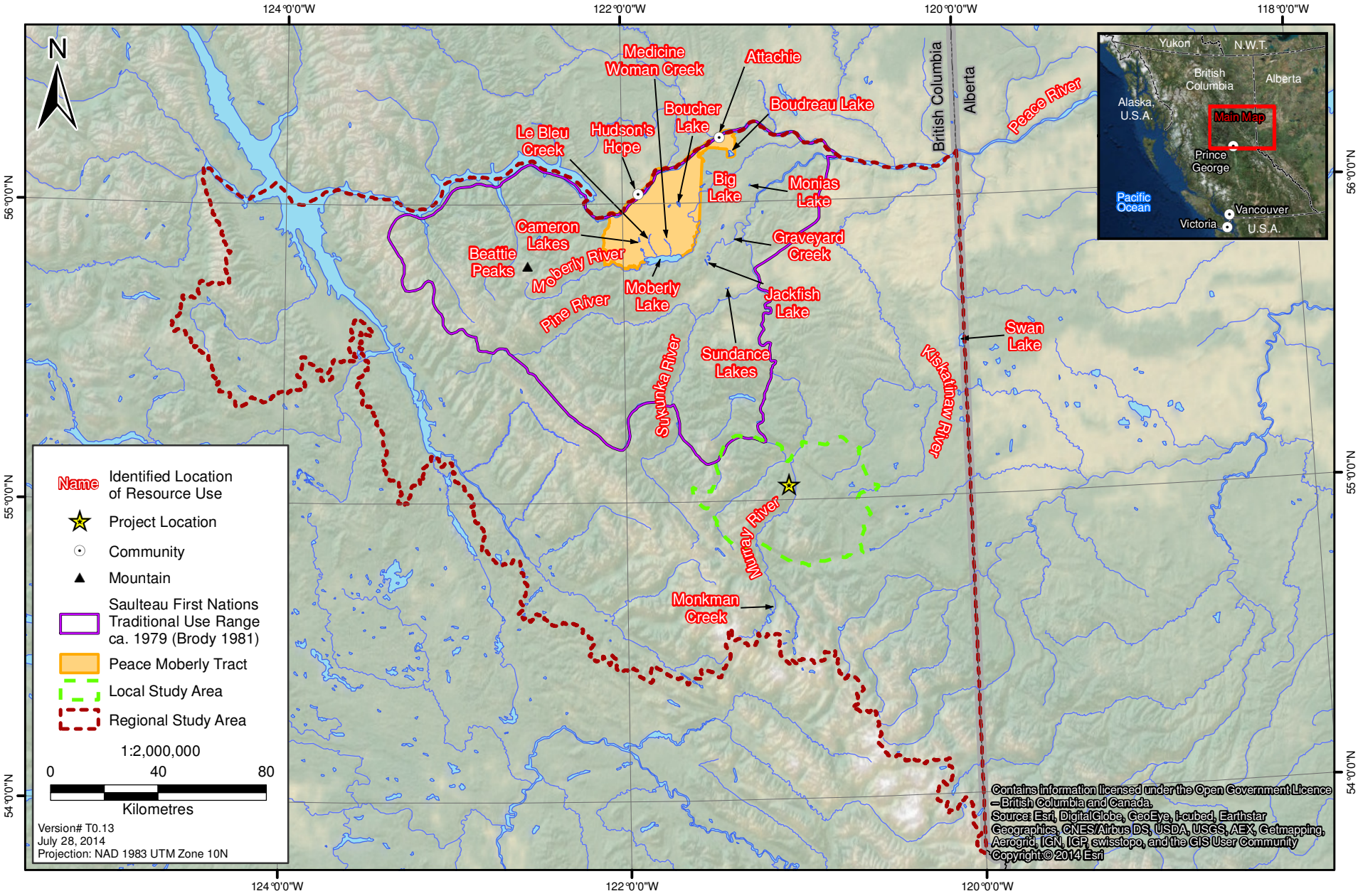
Traplines are concentrated in areas around Boucher Lakes, southwest of Monias Lake, and on the south side of the Peace River opposite from Hudson's Hope and Attachie, around Moberly Lake, around Big Lake, along the upper Pine River, along the Moberly River, around Boucher Lakes, around Monias Lake, and around Boudreau Lake (Traditions Consulting Services 2013b). Species harvested in these locations include (in descending order of frequency): rabbit, beaver, wolf, lynx, marten, squirrel, muskrat, weasel, coyote, fisher, mink, wolverine, and fox (Traditions Consulting Services 2013b).

SFN fishing takes place primarily in the Peace River and Moberly River, but occurs in other streams and water bodies. Key fish species harvested include (in descending order of frequency): rainbow trout, dolly varden, trout (unspecified), jackfish, grayling, bull trout, sucker and small trout (Traditions Consulting Services 2013b).

SFN gathering includes places along the shores of Moberly Lake, in the upper Moberly River watershed, in the area around Boucher Lakes, and in the general area north of Moberly Lake, in the general vicinity of Big Lake, around Monias Lake, around Cameron Lakes, and in the vicinity of the confluence of Farrell Creek and Alder Creek. Resources gathered in these location include: berries; trees (wood); plants (herb); Labrador tea; rat root; bullrush; wild onion; hay; and lumber (Traditions Consulting Services 2013b).

Figure 20.6-1

Saulteau First Nations- Locations of Traditional and Current Land Use



SFN has varied the location and nature of land uses within its traditional territory over time in response to a number of factors (Traditions Consulting Services 2013b). It is not possible to anticipate with precision the specific nature, timing, and location of harvesting activities in the future. However, SFN have made concerted efforts to maintain or re-establish their connections with their traditional hunting lands, including the establishiment of seasonal hunting, trapping, and gathering camps for the use of SFN members and as venues to teach youth about SFN traditional activities. Consequently, SFN anticipates that members will continue to use lands and resources within their traditional territory in the future (Traditions Consulting Services 2013b).

20.6.3 Scope of the Assessment

20.6.3.1 Valued Components Suggested by Saulteau First Nations for Inclusion in the Application/Environmental Impact Statement

During a community scoping meeting held by WMFN, SFN, and MLIB on April 16, 2013, community members identified the following VCs, in addition to those already identified in the AIR, for inclusion in the Application/EIS:

- **Atmosphere**: climate;
- **Fish and Fish Habitat:** arctic grayling;
- **Terrestrial Ecology:** plant health;
- **Wildlife and Wildlife Habitat**: little brown bat, gosling hawk, swans, reptiles (snakes), wolverine, green-throated warbler, wildlife health;
- **Social**: aesthetics, treaty rights; and
- **Human Health**: community and worker health and safety.

Chapter 6: Assessment of Air Quality and Greenhouse Gases Effects does not include climate as a VC as current scientific knowledge does not allow for the effects of any individual project on climate change to be assessed due to the global scale, uncertainty, and complexity of assessing effects of collective anthropogenic greenhouse gas emissions on climate. Instead, the chapter assesses the potential of the Project to produce greenhouse gases, which are compared with sector, provincial, federal, and international levels, consistent with guidance by the CEA Agency.

Chapter 9: Assessment of Fish and Fish Habitat Effects includes Arctic Grayling as a VC.

Chapter 11: Assessment of Terrestrial Ecology Effects includes Harvestable Plants as a VC.

Chapter 13: Assessment of Wildlife Effects includes the little brown bat within the Bats VC, gosling hawk within the Raptors VC, swans within the Waterbirds VC, wolverine within the Furbearers VC (fisher as a representative species), green-throated warbler within the Songbirds VC (black-throated warbler as a representative species). Reptiles were excluded as a VC as there are no reptile species of conservation concern in the area and the assessment of other terrestrial species acts as a proxy for snakes. Wildlife health is not included as a VC as this is a general concept that is captured by the specific wildlife assessments.

Chapter 16: Assessment of Non-traditional Land Use Effects excludes aesthetics as a VC, but includes changes in visual quality as potential effects to other VCs.

Chapter 15: Assessment of Social Effects does not include community and worker health and safety as a VC as the Project will be required to operate under the *Health, Safety and Reclamation Code for Mines in BC*. Community safety is addressed under the Crime and Other Social Problems VC.

This chapter (Chapter 20: Assessment of Aboriginal and Treaty Rights and Related Interests) assesses potential Project effects on treaty rights.

20.6.3.2 Incorporation of Saulteau First Nations' Traditional Knowledge and other Views into the Assessment

SFN's views regarding potential environmental effects of the project were incorporated into Project design (Section 20.6.1.3) and assessment methodology (Section 20.6.3.1).

20.6.3.3 Identification of Measurable Parameters

SFN state that their ability to meaningfully exercise their treaty rights depends on having sufficient quantity and quality of resources, as well as access to those resources (Appendix 17-B: Saulteau First Nations Knowledge and Use Study). According to SFN's understanding of their treaty rights outlined in Section 20.7.1, resources supporting the exercise of SFN's treaty rights include animals, fish, and vegetation harvested by members, as well as resources used for spiritual and ceremonial purposes. According to SFN, treaty rights also pertain to the ability to transmit culture between generations. The SFN Knowledge and Use Study (Appendix 17-B) identifies specific values that align with the interests identified above. The following measurable parameters can be derived from the foregoing:

- quantity and quality of subsistence resources: moose, caribou, and other wildlife; water and fish; berries, medicines and other plants
- quantity and quality of cultural, spiritual and ceremonial resources: burials; village sites; ceremonial areas; medicinal plants; and cultural teaching areas
- quantity and quality of incidental resources: temporary, seasonal or permanent camps and cabins
- Access to resources: trails; water routes; and navigation sites

SFN suggest that the Project has the potential to interact with the above values in the following ways (Appendix 17-B):

- habitat destruction and fragmentation;
- movement of animals further away from preferred areas for harvesting;
- disturbance of important environmental features, such as moose licks;
- airborne dust from the mine or along transportation routes from trucks and trains;

- contamination of water, plants, and animals from dust and chemicals;
- increased traffic;
- increased non-Aboriginal hunting and use of the area; and
- cumulative impacts.

20.6.4 Potential Effects on Saulteau First Nations' Aboriginal and Treaty Rights and Related Interests

20.6.4.1 Subsistence Resources

SFN have identified a number of site-specific subsistence uses in the vicinity of the Project (Appendix 17-B), including:

- 44 values within 250 m of the Project;
- 20 further values within 5 km of the Project; and
- 91 further values within 25 km of the Project.

Site-specific subsistence values include game kill locations, fish catch sites, plant and firewood gathering sites, and a drinking water collection site.

Wildlife

SFN members report wildlife harvesting activities within the vicinity of the Project (Appendix 17-B). Moose, elk, deer, wolf, grouse, rabbit, and porcupine have been harvested within 250 metres of the Project. Additional species, including caribou, goat, and sheep, have been harvested within 5 km of the Project.

During a meeting held on July 13, 2012, SFN Band Councillors raised concerns about potential effects of the Project on caribou habitat. During an April 16, 2013 community meeting with SFN, WMFN, and the MLIB (facilitated by the three Aboriginal groups' third party reviewer), community members raised concerns about:

- Potential impacts to caribou habitat;
- Potential impacts on migration patterns, sensitive lifecycle periods, and health of wildlife; and
- Potential impacts of the Project's conveyor belt on wildlife;

In comments on the draft AIR, SFN raised concerns about potential effects of sensory disturbance on caribou.

The SFN Knowledge and Use Study (Appendix 17-B) states that the Project "is anticipated to have important and potentially significant impacts on SFN harvesting rights." Key SFN concerns, as summarized on pp. 42-43 of the study, include the following:

- Disturbance of animals during project construction and operation, causing them to move away from the area – particular concern was expressed over caribou, as their numbers are already low and they are sensitive to disturbance, and moose, as they are a particularly important resource for SFN members;
- Habitat fragmentation from land clearing for mine operations and road construction, limiting animal movement and reducing the size of habitat areas available to animals
- Dust from the coal mine being inhaled by animals, or other chemicals from the mine being ingested by animals, leading to contamination of their meat and consequent impacts on human health
- Linear disturbances (roads or rail) improving hunting success rates for predators such as wolves and bears, leading to reduced numbers of prey species such as moose, elk, and caribou – this in turn leads to increasing numbers of bears and wolves, adding further pressure to prey species
- Linear disturbances (roads or rail) improving access for hunters, and increasing their success rates due to long lines of sight, adding to hunting pressures on wildlife populations; and
- Construction work on the mine bringing increasing numbers of people into the area, and familiarizing them with good hunting locations, adding hunting pressure to wildlife populations

During the April 2013 community meeting, community members suggested seven wildlife VCs in addition to VCs proposed by the Proponent, including: Little Brown Bat, Gosling Hawk, swans, reptiles (snakes), Wolverine, Green-Throated Warbler, and wildlife health.

The Assessment of Wildlife Effects (Chapter 13) assessed effects of the Project on caribou, moose, mountain goat, elk, grizzly bear, furbearers, bats, raptors, songbirds, waterbirds, and amphibians. The assessment examined the potential of the Project to affect the abundance and quality of wildlife populations in the vicinity of the Project by creating 1) habitat loss and alteration, 2) sensory disturbance, 3) disruption of movement, 4) direct and indirect mortality, 5) attractants, and 6) chemical hazards.

The assessment scoped out potential effects due to indirect mortality and chemical hazards for most species. Indirect mortality effects were scoped out as the Project will not construct new roads that could provide access for hunters into new areas. Effects associated with chemical hazards arise through wildlife ingestion of contaminated vegetation, soil and water. According to the Assessment of Health Effects (Chapter 18), the Project is not predicted to result in contamination of soil above soil quality guidelines, which also entails that vegetation will not be adversely affected. M19 and M19a Creeks and the wetland habitat between the Coal Processing Site and the Murray River are anticipated to exceed water quality guidelines for the protection of wildlife for selenium. However, little high-quality wildlife habitat is located in these areas.

The assessment found that high elevation species, including caribou and mountain goats, will not be affected as the Project is located at a low elevation in a valley adjacent to the Murray River. Bats, raptors, songbirds, waterbirds and amphibians are not predicted to be adversely affected as the

Project would remove a small area of habitat and each of these VCs have strong populations. Effects on elk were predicted to be negligible, as the Project will result in a relatively small direct and functional (i.e. sensory disturbance-related) loss of habitat and/or disruption to movement.

Moose and furbearers are predicted to be affected by habitat loss and alteration, while moose, grizzly bear and furbearers are predicted to be affected by disruption of movement.

In a comment on the draft AIR, SFN suggested that the Project design "should contain avoidance areas including but not limited to games trails, mineral licks and culturally sensitive material, berry picking, fishing, hunting, gathering medicines." Mitigation measures for moose habitat loss and alteration include: avoidance of important habitat where practical alternatives are available (e.g. habitat loss and alteration was minimized through Project design); maintaining known and potential mineral licks in a natural state; ensuring that ungulates have access to mineral licks during the season when they are most used; avoiding destruction or disruption of areas that contain known wallows, particularly during the ungulate breeding season; and re-vegetation of some reclaimed components during Decommissioning and Reclamation. Mitigation measures of furbearers habitat loss and alteration include: avoidance of important habitat where practical alternatives are available (e.g. habitat loss and alteration was minimized through Project design); no destruction or disruption of active fisher or marten dens during site clearing in the construction phase and during Construction and Operation; and re-vegetation of some reclaimed components during Decommissioning and Reclamation. In addition, the Proponent has developed a Wildlife Management Plan (Section 24.12). These measures will minimize habitat loss and alteration for moose and furbearers.

Mitigation measures for disruption to movement include: giving wildlife the right-of-way along access roads and the highway; and enforcing speed limits along on-site Project roads. In addition, the Proponent has developed a Wildlife Management Plan (Section 24.12). These measures will minimize disturbance and habitat avoidance (as well as mortality) related to roads, traffic, and noise.

Effects of habitat loss on moose are predicted to be not significant. The Project will result in a relatively small habitat loss (1.6% of the high-quality winter and summer habitat in the RSA, and an additional 2.3% affected by subsidence). Habitat loss will be localized in extent and reversible over time. In addition, moose are considered to be resilient to disturbed and fragmented habitat. Effects of habitat loss on furbearers are predicted to be not significant. The loss and alteration of habitat is small enough (equivalent to approximately one female fisher or half a male fisher's home range) to maintain sufficient habitat to support regional furbearer populations.

Project-related disruption of moose movement is not predicted to be significant, because the magnitude of the effect will be minor, moose are relatively highly resilient to disturbed and fragmented habitat, moose are common throughout BC, and the effect is reversible. Effects of disruption to movement on grizzly bears are predicted to be not significant. The Project will present relatively small barriers to grizzly movements, as grizzly bears have very large home ranges and move across the landscape continuously and have a variety of habitats that they use for movement. The effect will be reversible once operations cease. Effects of disruption of movement on furbearers are predicted to be not significant. Some riparian habitat is anticipated to be undisturbed within the Mine Site Assessment Footprint that would continue to allow furbearer movement past the Project area. The effect is reversible over the long term through reclamation activities.

Moose are frequently harvested by SFN members (Section 20.6.3) and have been harvested within 250 metres of the Project (Appendix 17-B). Project-related adverse effects on moose due to habitat loss and disruption of movement, while not significant, may reduce SFN moose hunting opportunities in the vicinity of the Project (Chapter 17: Assessment of Current Use of Lands and Resources for Traditional Purposes Effects). However, the Project is not predicted to reduce the overall quantity or quality of moose and moose will remain available to SFN hunters within other preferred hunting areas (Chapter 17: Assessment of Current Use of Lands and Resources for Traditional Purposes Effects).

The SFN Knowledge and Use Study (Appendix 17-B) did not identify grizzly bear harvesting within the vicinity of the Project. However, as the SFN Knowledge and Use Study interviewed only a sample of SFN land users, it is possible grizzly bear harvesting could take place within the vicinity of the Project.

In addition to limitations on the exercise of Treaty 8 hunting rights associated with the quantity of available resources, the exercise of SFN's Treaty 8 hunting rights may be affected due to Project-related sensory disturbance at preferred hunting locations and reductions in perceived quality of resources (Section 17.7).

Other current and reasonably foreseeable projects in the region were assessed for their potential to interact with the Project to create cumulative effects on wildlife (Chapter 13: Assessment of Wildlife Effects, Section 13.11; Chapter 21: Federal Cumulative Effects Assessment, Section 21.12). The cumulative effects assessment identified residual cumulative effects for moose and grizzly bear. Residual cumulative effects for moose include reduction in available high-quality habitat and reduced movement of moose along the Murray River. The residual cumulative effect for grizzly bear is reduced movement of grizzly bear along the Murray River.

Past and present developments in the RSA have resulted in the loss and alteration of 4.9% and 3.5% of moose habitat, respectively. The Project will remove and alter an additional 0.2% and 0.7% of late winter habitat. Additional future projects will remove and alter an additional 0.9% and 3.1% of moose late winter habitat. The majority of future effects are due to, in decreasing order: wind power projects, oil and gas, and mining. The total area of habitat removed due to all past, present and future activities is 1,178 ha of winter habitat, or 5.9% of the high quality habitat in the RSA. Assuming a moose density of 0.003 moose/ha, this area is equivalent to the home ranges of 3.5 moose.

The cumulative effect on moose habitat is rated as not significant (minor) for the following reasons:

- the cumulative effect will result in a relatively small amount of habitat loss;
- several forms of habitat alteration are beneficial to the moose population;
- the effect is reversible as both forestry and most mining operations are suitable for reclamation post-closure;
- the resiliency of the moose population to disturbed and fragmented habitat is relatively high; and
- moose are common throughout BC.

The distribution of infrastructure along Murray River due to mining and forestry operations was evaluated as a residual cumulative effect on the disruption of movement of moose north and south through the Murray River corridor. The Wolverine River corridor will be relatively unaffected by the Project, with the exception of rail traffic twice a day. The combination of all past, present and future activities on the MRRMZ will result in the removal of 9.8% (155 ha) of winter habitat and the further alteration of an additional 14.2% (224 ha) of habitat.

The cumulative effect of disruption of moose movement is assessed as not significant (minor) for the following reasons:

- the residual effect of disruption of moose movements is expected to have a minor magnitude;
- the effect will be reversible long term because of reclamation activities of development areas along the Murray River;
- the resiliency of the moose population to disturbed and fragmented habitat is relatively high;
- moose are common throughout BC.

Currently, 11.2% of grizzly bear spring habitat has been lost in the Murray River Resource Management Zone (MRRMZ), largely due to transportation corridors and 34.3% has been altered, largely by forestry. The addition of the Murray River project would remove an additional 2.3% and alter an additional 1.2% of spring habitat for grizzly bears in the MRRMZ. Additional future projects, largely oil and gas, may cause the loss and alteration of an additional 3.4% and 6.7% of spring habitat for a total of 17% lost and 42% altered. Note that the altered habitat is largely forestry cutblocks and pipeline rights of way, which grizzly bears may use to forage or movements (Nielsen et al. 2004).

The cumulative effect of disruption to grizzly bear movement is assessed as not significant (moderate) for the following reasons:

- Due to the relatively high proportion of habitat lost and altered in the MRRMZ, the magnitude of the effect is rated as medium. However, this effect is mitigated, to some degree, by the movement habits of grizzly bears. Bears have very large home ranges and move across the landscape continuously and have a variety of habitats that they use for movement, including riparian, mid elevation and alpine;
- It is not expected that this effect will have local or regional population-scale effects; and
- The effect will be reversible in the long-term once the projects end. Bears may temporarily avoid habitats where there is a barrier to their movement, but are expected to re-occupy the habitat once the disturbance is removed.

While residual cumulative effects on moose and grizzly bear are predicted to be not significant (minor), the exercise of SFN's Treaty 8 rights with respect to the quantity of wildlife may differ between future conditions with the Project and future conditions without the Project.

In addition, other foreseeable future mining, hydroelectric, and other commercial activities, such as oil and gas exploration have the potential to act cumulatively with the Project by adding to the

visual and auditory changes in the LSA. This is a spatial/temporal crowding effect in that it reduces the number of hunting and trapping locations in the LSA considered to be free of auditory or visual disturbances (Section 17.10.2.6). Other foreseeable future mining, hydroelectric, and other commercial activities, such as oil and gas exploration, also have the potential to act cumulatively with the Project by reducing the number of wildlife harvesting areas thought to be free of contamination by Aboriginal groups. This is a nibbling loss effect in that it contributes incrementally to perceived contamination of country foods (Section 17.10.2.6).

Consequently, the exercise of SFN's Treaty 8 hunting rights with respect to the experience of the environment while hunting and the perceived quality of resources may differ between future conditions with the Project and future conditions without the Project. During a meeting with the Proponent held on May 21, 2014, the SFN Treaty, Lands and Sustainable Resource Management Office suggested the following mitigations for potential impacts on SFN Aboriginal and treaty rights and related interests:

- participation in ongoing monitoring, during pre-mine, during construction and operations, and post-mine periods;
- ongoing communication with the Proponent, including translation of technical reports for SFN membership; and
- continuity of use (e.g. via ongoing monitoring) to prevent the creation of 'avoidance areas' for SFN members.

Water and Fish

SFN members report fish harvesting within the vicinity of the Project (Appendix 17-B: Saulteau First Nations Knowledge and Use Study). SFN members report catching bull trout, grayling, rainbow trout, and whitefish within 250 m of the Project. Members also report multiple fishing sites for bull trout, grayling, and rainbow trout downstream from the Project on the Murray River, particularly around Tumbler Ridge.

During an April 16, 2013 community meeting with SFN, WMFN, and the MLIB (facilitated by the three Aboriginal groups' third party reviewer), community members raised concerns about:

- Potential changes in water quantity and quality and subsequent impacts to fish habitat;
- Impacts on spawning; and
- Health impacts from eating contaminated fish.

The SFN Knowledge and Use Study (Appendix 17-B) states that "the Project is anticipated to have important and potentially significant impacts on SFN harvesting rights, and other related rights, associated with water and fish within the footprint within 250 metres of the Project], the LSA [within 5 km of the Project footprint] and potentially downstream in the RSA [within 25 km of the Project footprint]" (pp. 46-47). Concerns relating to water and fish raised by SFN members, as summarized on pp. 46-47 of the study, include the following:

- Potential contamination or perceived contamination of rivers and water courses in the Project footprint and LSA, particularly due to coal dust but also other contaminants entering the water from mine operations. These impacts would potentially also be felt for considerable distances downstream, beyond the LSA and RSA
- Potential contamination or perceived contamination of fish due to coal dust and other contaminants in the Project footprint and LSA. These impacts would potentially also be felt for considerable distances downstream, beyond the LSA and RSA.
- Potential physical disturbance of water courses and fish habitat along the Murray River.
- Potential contamination or perceived contamination of animals which drink or depend on water, with consequent impacts on SFN use, and potential environmental health impacts or impacts on human health if these animals are consumed.
- Cumulative impacts of the mine together with other industrial operations on contamination or perceived contamination of water and fish downstream of the Project footprint, LSA and RSA, through the Murray River, Pine River and into the Peace River.
- Potential disruption of ungulate calving, which takes place near to water courses, by the construction and operation of the mine.

Project activities are predicted to result in minor streamflow changes to M17B, M19A, and M20 creeks. Given the minor magnitude, limited geographic extent, and reversibility of the effects, the Project is not expected to result in significant adverse effects to surface water quantity (Chapter 8: Assessment of Surface Water and Aquatic Resources Effects). Project activities are not expected to result in significant adverse effects to water effluent quality (Chapter 8: Assessment of Surface Water and Aquatic Resources Effects). The Project will minimize discharge of contact water into the environment and implement a number of environmental management plans, including:

- Water Management Plan (Section 24.6);
- Metal Leaching and Acid Rock Drainage Management Plan (Section 24.7);
- Selenium Management Plan (Section 24.10);
- Erosion and Sediment Control Plan (Section 24.5);
- Subsidence Management Plan (Section 24.16); and
- Air Quality and Dust Control Plan (Section 24.2).

The Assessment of Fish and Fish Habitat Effects (Chapter 9) included Arctic Grayling as a VC in response to Aboriginal groups' suggestions during the April 2013 community meeting. The Project is not expected to affect fish through the introduction of contaminants (chemicals, nitrogeneous compounds, or petroleum products) into water bodies. The Project is not predicted to adversely affect fish and fish habitat due to direct mortality, erosion and sedimentation, change in water quality, or habitat loss associated with stream crossings and infrastructure (Chapter 9: Assessment of Fish and Fish Habitat Effects).

Measures proposed by the Proponent to mitigate any potential Project effects on fish (in addition to water quality control) include:

- adhering to appropriate fisheries operating windows for fish-bearing streams;
- minimizing the potential for spills into fish-bearing streams;
- protecting fish habitat near project infrastructure; and
- adhering to all regulations and best-practices.

Water quality modelling undertaken for the Project did not predict that Project-related changes, including dust deposition, would increase concentrations of contaminants above water quality guideline thresholds (for contaminants currently below guideline thresholds). Consequently, no effects to the quality of terrestrial country foods are predicted, and no effects to human health are predicted (Chapter 18: Assessment of Health Effects).

No residual effects to fish and fish habitat as a result of the Project are predicted (Chapter 9). Consequently, the Project is not expected to contribute to cumulative effects to fish and fish habitat (Chapter 9).

The Project is not expected to affect SFN's treaty rights to fish in relation to the quantity of fish available. However, the Project may affect SFN's fishing rights due to: reduced quality of fishing experience associated with Project-related noise and visual changes; and reduced perceived quality of fishing resources (Section 17.7).

Given that no residual cumulative effects on fish and fish habitat are predicted, the exercise of SFN's Treaty 8 rights with respect to the quantity of fish are not expected to differ between future conditions with the Project and future conditions without the Project. However, other foreseeable future mining, hydroelectric, and other commercial activities, such as oil and gas exploration have the potential to act cumulatively with the Project by adding to the visual and auditory changes in the LSA. This is a spatial/temporal crowding effect in that it reduces the number of fishing locations in the LSA considered to be free of auditory or visual disturbances (Section 17.10.2.5). Additionally, other foreseeable future mining, hydroelectric, and other commercial activities, such as oil and gas exploration have the potential to act cumulatively with the Project by reducing the number of streams or watercourses thought to be free of contamination by Aboriginal groups. This is a nibbling loss effect in that it adds incrementally to perceived contamination of fish resources in preferred locations (Section 17.10.2.5). Consequently the exercise of SFN's Treaty 8 rights may differ between future conditions with the Project and future conditions without the Project with respect to quality of experience while fishing and perceived quality of fish resources.

Berries, Medicines, and Other Plants

SFN members report plant gathering sites within the vicinity of the Project (Appendix 17-B: Saulteau First Nations Knowledge and Use Study). Members report gathering blueberries and firewood within 250 m of the Project, and huckleberries and cranberries within 5 km of the Project.

During an April 16, 2013 community meeting with SFN, WMFN, and the MLIB (facilitated by the three Aboriginal groups' third party reviewer), community members raised concerns about potential impacts of contaminants on plant health. Members suggested "plant health" as a VC.

The SFN Knowledge and Use Study (Appendix 17-B) states that "the Project is anticipated to have important and potentially significant impacts on SFN harvesting rights, and other related rights, associated with food plants and medicinal plants" (p. 50). Concerns relating to berries, medicines, and other plants raised by SFN members, as summarized on p. 50 or the study, include the following:

- direct removal of plants, and destruction of habitat, during the construction of the mine, particularly medicines;
- replacement of native species with non-native species during reclamation; and
- contamination or perceived contamination of plant picking sites due to coal dust or due to spaying of herbicides around the mine or along roads and access routes used for mine construction, operations, and maintenance.

The Project is predicted to result in residual adverse effects to harvestable plants within the Project footprint due to the removal of ecosystems that support harvestable plants, the alteration of cleared sites' ability to provide habitat for harvestable plants, and subsidence effects (Chapter 11: Assessment of Terrestrial Ecosystem Effects). Mitigation measures will include:

- limiting the extent of vegetation clearing during Construction activities to the required minimum. During Construction soil will be stripped and stockpiled for future reclamation. This process will continue on a smaller scale during Operation to match the expanding footprint of the Coarse Coal Reject storage facilities;
- minimizing soil degradation (i.e., erosion) by salvaging soil during appropriate weather conditions, transporting to stockpiles in a timely manner, and establishing and implementing erosion control procedures early during the salvage process;
- carrying out dust suppression on roads to prevent fugitive dust from impacting plants and soils;
- promptly re-vegetating exposed soil surfaces during the appropriate growing season and conditions using seeds (and/or plants) suitable for the local area and ecosystems to avoid erosion and sedimentation, introduction of invasive plants, and to facilitate the re-establishment of ecological functions in the affected areas;
- providing appropriate education and training for employees and contractors outlining how to minimize effects on ecosystems, soils, and vegetation. This information will be prepared and made available to all employees on-site (e.g., through the Project Safety Office or other designated location) in the form of fact sheets and/or handbooks; and
- conducting follow up monitoring of cleared sites to monitor erosion and sediment control.

The potential loss and alteration of harvestable plants is not predicted to be significant, primarily due to the limited magnitude and extent of ecosystem removal caused by Project site clearing. Section 20.6.5.2 addresses mitigations for potential Project-related effects on medicinal plants.

However, the success of SFN's gathering activities in the LSA may be adversely affected due to loss and alteration of harvestable plants in the LSA (Section 17.6.3.3).

The Assessment of Health Effects (Chapter 18) assessed, among other things, the potential of the Project-related changes in soil quality to affect the health of people who harvest and consume plants and berries. Specifically, the assessment examined the potential of the Project to change concentrations of metals in soil as a result of deposition of dust containing metals. During the Operation phase, predicted mean metal concentrations in soil were lower than CCME Guidelines for the Protection of Environmental and Human Health for agricultural land, except for barium, cadmium, and selenium. However, the predicted mean concentrations for these three metals are not predicted to differ significantly from baseline conditions. No effects vegetation via root uptake of contaminants are expected during any phase of the project since no significant changes in soil quality were identified during the Operation phase. Consequently, no effects on human health due to ingestion of berries is predicted.

Nevertheless, SFN members may perceive reduced quality of resources gathered in the LSA, despite a prediction of no residual effects on country foods (Section 17.6.3.3).

Other current and reasonably foreseeable projects in the region were assessed for their potential to interact with the Project to create cumulative effects on terrestrial ecosystems (Chapter 11). The assessment predicts a cumulative residual effect of loss or alteration of harvestable plant quantity or quality for harvestable plants. The cumulative loss and alteration to harvestable plant habitat is difficult to accurately characterize because the location, type and quantity of harvestable plants within the region is unknown. Many of the ecosystems within the region can provide suitable habitat for harvestable plants and as such harvestable plant habitat was assessed in relation to effects on forested ecosystems. However, the effects to harvestable plant habitat are expected to be considerably less in extent than the loss and alteration reported for forested ecosystem. Furthermore, in certain cases, human derived alteration will increase the amount of harvestable plant habitat.

Loss and alteration of harvestable plants are considered not significant (Chapter 11). The magnitude of the direct effects to harvestable plants is considered moderate because although 33.7% of the available habitat could be lost or altered by cumulative effects, some of the human derived alteration will increase the amount of harvestable plants. Development activities such as timber harvesting can favour berry production by increasing the light available to plants and by reducing competing vegetation. Other cumulative effects to harvestable plants include nibbling loss of relevant habitat, physical transport of invasive plant propagules, spatial and temporal crowding in areas where multiple project effects intersect with harvestable plant habitat as well as additive effects from the accumulation of metals in some soils and subsequent plant uptake as well as growth inducing effects due to the creation of new edges. All of the effects are considered regional in extent and reversible in the long term. The duration of effects are expected to occur over the medium to long term depending on the relevant plant and its associated habitat requirements. In an ecological context, harvestable plants are considered neutral as they have some unique attributes, particularly to the local communities (discussed further in Chapter 16, Land Use). There is a medium level of confidence in the analyses because the effects to harvestable plants are generally well understood; however, uncertainty exists regarding the magnitude of alteration.

Other foreseeable future mining, hydroelectric, and other commercial activities, such as oil and gas exploration have the potential to act cumulatively with the Project by adding to the visual and auditory changes in the LSA. This is a spatial/temporal crowding effect in that it reduces the number of gathering locations in the LSA considered to be free of auditory or visual disturbances. Other foreseeable future mining, hydroelectric, and other commercial activities, such as oil and gas exploration have the potential to act cumulatively with the Project by reducing the number of plant harvesting areas thought to be free of contamination by Aboriginal groups. This is a nibbling loss effect in that it reduces the number of plant harvesting locations perceived to be available for use, and potentially putting additional strain on the harvestable plant resources available in those areas.

While residual cumulative effects on harvestable plants are predicted to be not significant, the exercise of SFN's Treaty 8 rights with respect to berries, medicines, and other plants may differ between future conditions with the Project and future conditions without the Project. In addition, the exercise of SFN's Treaty 8 gathering rights with respect to the experience of the environment while gathering and the perceived quality of gathered resources may differ between future conditions with the Project and future conditions without the Project.

20.6.4.2 Cultural, Spiritual and Ceremonial Resources

SFN members report the existence of cultural and spiritual values within the vicinity of the Project (Appendix 17-B: Saulteau First Nations Knowledge and Use Study). Members report a general trapping area, a medicine plant gathering area, and a sacred place within 250 m of the Project. Place names and a burial site are located within 5 km of the Project, as well as additional medicine plant gathering areas and sacred places.

During an April 16, 2013 community meeting with SFN, WMFN, and the MLIB (facilitated by the three Aboriginal groups' third party reviewer), community members raised concerns about potential impacts of the Project on spiritual and ceremonial sites. Specific concerns related to sacred mountains, sacred animals, and sites used to transmit culture.

According to the SFN Knowledge and Use Study (Appendix 17-B), "SFN members state that the Murray River Coal Project, with its impacts on the look and feel of the landscape, as well as on the quality and quantity of animals and other resources in the area, would discourage them from visiting or teaching their children in the area, with a consequent reduction in cultural continuity" (p. 56). Key SFN concerns with respect to cultural continuity, as summarized on p. 57 of the report, include the following:

- Direct disturbance and reduced access to areas adjacent to the Murray River that are used for a range of cultural activities, including harvesting of wildlife, teaching of children, and related practices;
- Changes in sense of place, due to changes in the character and feel of the Project footprint and LSA due to landscape disturbance and increased pressure from traffic, light, noise, and non-Aboriginal hunters, leading to reduced ability of SFN members to maintain connections to nearby land and waters and exercise their SFN treaty rights; and

- Reduced opportunities for teaching how to use resources and associated cultural protocols due to reductions in wildlife populations or contamination or perceived contamination of resources in the project footprint, LSA, and downstream along the Murray River.

Without knowing the precise locations of SFN's general trapping area, medicine plant gathering area, and sacred place located within 250 m of the Project, it is not possible to predict potential effects with any degree of precision. However, should they overlap with the Project footprint, these cultural, spiritual and ceremonial resources could be adversely affected Project activities during Construction and Operation.

According to the Assessment of Terrestrial Ecology Effects (Ch. 11), the Project is expected to result in residual effects to harvestable plants due to: the removal of ecosystems that support harvestable plants; the alteration of cleared sites' ability to provide habitat for harvestable plants; and subsidence effects (see Section 20.7.4.1). This effect is not predicted to be significant for terrestrial ecosystems, due the limited magnitude and extent of ecosystem removal caused by Project site clearing. However, during a meeting held on May 21, 2014, the SFN Treaty, Lands and Sustainable Resource Management Office informed the Proponent that SFN members consider that medicinal plants gain their properties in relation to their specific locations and, consequently, other plants in other locations may not be equivalent. Consequently, removal of the medicine plant gathering area could constitute an adverse effect to SFN cultural, spiritual, and ceremonial resources.

The Assessment of Heritage Effects did not assess the potential of the Project to affect spiritual sites in the vicinity of the Project. However, if the spiritual site is located within the Project footprint, it will likely be adversely affected through site clearing activities.

As noted in Section 20.6.5.1, the SFN Lands and Sustainable Resource Management Office suggested that prior to Construction, the Proponent could work with the individual(s) who supplied site specific information regarding cultural, spiritual, and ceremonial values to inquire how the individual(s) wold like to protect the values. Such work may include ground-truthing the location of the value and developing specific mitigation measures.

According to the Assessment of Wildlife Effects (Ch. 13), furbearing species are predicted to be affected by habitat loss and alteration and disruption of movement (see Section 20.7.4.1). However, effects of habitat loss on furbearers are predicted to be not significant as the loss and alteration of habitat is small enough (equivalent to approximately one female fisher or half a male fisher's home range) to maintain sufficient habitat to support regional furbearer populations. Effects of disruption of movement on furbearers are predicted to be not significant. Some riparian habitat is anticipated to be undisturbed within the Mine Site Assessment Footprint that would continue to allow furbearer movement past the Project area. The effect is reversible over the long term through reclamation activities.

The Project is not predicted to result in significant adverse effects to the abundance and distribution of wildlife, fish, and vegetation due to direct disturbance (see Section 20.7.4.1, and Chapters 9, 11, and 13). However, SFN harvesting activities could be limited due to sensory disturbance and perceived reductions in the quality of harvested resources (Section 17.7). Consequently, the Project may adversely affect SFN cultural continuity related to teaching of children.

The Proponent will implement a noise management plan (Section 24.3) to mitigate potential noise effects, and will work with individuals as appropriate to address specific noise concerns that may arise.

Visual effects are not anticipated at lower elevations as Project infrastructure is mostly shielded by vegetation, and the Project will be required to follow Visual Quality Objectives outlined in the Dawson Creek LRMP (Chapter 17: Current Use of Lands and Resources for Traditional Purposes Effects). Exceedances of dust deposition will only occur within one kilometre of the Murray FSR and Highway 52, and only for six months out of the year (see Chapter 6: Assessment of Air Quality Effects). Mitigation measures for fugitive dust suppression include wetting work areas, roads, and storage piles, installing covers to equipment and loads carried by vehicles, installing windbreaks or fences, and using dust hoods and shields. Harvesters may be able to view the Coal Processing Site at higher elevations, especially on the east side of the Murray River where views are unobstructed due to past logging activity (Visual Quality Baseline, Appendix 16-C). The Proponent will work with SFN prior to construction to determine if members utilize areas from which the Project would be visible and to develop appropriate mitigation measures.

SFN members raise a concern that the Project could change the character and feel of harvesting areas in the vicinity of the Project by increasing the presence of non-Aboriginal hunters. The Project will not provide non-Aboriginal hunters with access into new areas, as it will not construct new roads. No hunting will be permitted in the Project exclusion zone for safety reasons. Employees and contractors will not be permitted to hunt during working hours. However, depending on the potential of new residents to hunt, and to hunt in the same areas as SFN members, the Project has the potential to increase interactions between non-Aboriginal and Aboriginal hunters.

Other foreseeable future mining, hydroelectric, and other commercial activities, such as oil and gas exploration have the potential to act cumulatively with the Project by adding to the visual and auditory changes in the LSA. This is a spatial/temporal crowding effect in that it reduces the number of locations in the LSA considered to be free of auditory or visual disturbances (Section 17.10.2.8). Consequently, future conditions for the exercise of SFN's cultural, spiritual, and ceremonial treaty rights are expected to differ between future conditions with the Project and future conditions without the Project.

20.6.4.3 Habitation Resources

SFN members report the existence of a permanent hunting cabin previously used by SFN members in the 1960s and a camping site within 250 m of the Project and regularly used camping sites within 5 km of the Project.

The precise location of habitations within the Project footprint is unknown, so it is not possible to assess potential effects with precision. If the habitations overlap with the Project footprint, the habitations could potentially be adversely affected due to site clearing activities during Construction. SFN access to habitation sites within the Project footprint will be restricted for safety reasons. Camping sites outside of the Project footprint will not be directly disturbed by the Project (Chapter 17: Assessment of Current Use of Lands and Resources for Traditional Purposes Effects). The Proponent will work with SFN to identify the locations of habitations within the Project footprint and to develop appropriate avoidance and/or other mitigation measures.

Given these potential direct effects, SFN's exercise of its Treaty 8 rights with respect to habitation resources is may differ between future conditions with the Project and future conditions without the Project.

20.6.4.4 Access to Resources

SFN members report that access routes actively used by members while exercising treaty rights are located in the vicinity of the Project (Appendix 17-B: Saulteau First Nations Knowledge and Use Study). Members report the existence of roads and trails used for hunting sheep and elk within 250 m of the Project. Members report water routes, roads and trails frequently used for hunting, fishing, gathering, and camping within 5 km of the Project.

According to the SFN Knowledge and Use Study (Appendix 17-B), "the Project is anticipated to have important and potentially significant impacts on SFN access rights, and other related rights. This will be the case within the Project footprint [within 250 m of the Project], LSA [within 5 km of the Project, and potentially also the RSA [within 25 km of the Project]" (p. 53). Key SFN concerns with respect to access to resources, as summarized on p. 53 of the report, include the following:

- The destruction of specific important sites for harvesting resources or cultural activities during mine construction and operation;
- Access to areas of the project footprint and LSA being curtailed by gates and fences blocking SFN movement;
- Visible landscape destruction, noise, and increased traffic changing the character and safety of the project footprint and LSA, deterring SFN members from using the area;
- Reduced access to, and enjoyment of, resources for SFN members because of increased access and increased presence of non-aboriginal hunters, leading to competition for increasingly scarce resources and a perception of danger as SFN members feel it is unsafe to be out on the land when so many people are shooting;
- Reduced access to wildlife populations in the area as a result of impacts to habitat and diminishing suitability of the LSA for subsistence harvesting;
- Excluded or reduced SFN use of the project area and LSA due to fears related to coal dust and other contaminants; and
- Cumulative impacts on SFN use and access caused by other industrial activities in the area adding to the impacts of the proposed project.

The potential for the Project to result in the destruction of specific important sites for harvesting resources or cultural activities during mine construction and operation is addressed in Section 20.7.4.1 and Chapter 13 with respect to wildlife, Chapter 11 with respect to harvestable plants, and Section 20.7.4.2 with respect to cultural activities. The Assessment of Fish and Fish Habitat Effects (Chapter 9) does not predict that the Project will directly affect fish habitat, as it will follow DFO's operational statements for bridge and culvert (DFO 2007) and DFO's (1993) Land Development Guidelines for the Protection of Aquatic Habitat.

SFN members' access to the Project Assessment Footprint will be restricted for safety reasons (Chapter 17: Assessment of Current Use of Lands and Resources for Traditional Purposes Effects). In addition, the Proponent may need to temporarily close the Murray River FSR during construction to move mine equipment to the Project site. The road closures will be isolated incidences. SFN members will not be prevented from accessing other areas within their traditional use territory. SFN access to the Murray River will not be affected by the Project, either by land or water, as navigation along Murray River will not be impacted (Chapter 16, Assessment of Land Use Effects).

Mitigation measures for Project effects related to access include:

- Providing advance notice to Aboriginal groups about temporary road closures and publishing notices to advise Aboriginal groups of road closures;
- Engage in discussions with SFN to allow members access to trails and habitations in the Mine Site Assessment Footprint, subject to ensuring public safety.

Effects related to quality of experience of the environment are described in Section 20.6.4.2.

Effects related to increased presence of non-Aboriginal hunters are described in Section 20.6.4.2.

Effects related to the abundance and distribution of wildlife resources are addressed in Section 20.6.4.1.

Effects related to contaminants are addressed in Section 20.6.4.1.

The Project is not expected to interact with other past, present, or anticipated future activities to result in a cumulative effect on SFN access to lands and resources (Chapter 17: Assessment of Current Use of Lands and Resources for Traditional Purposes.

Other current and reasonably foreseeable projects in the region have the potential to adversely affect SFN's routes of access and transportation in the future (Chapter 17: Assessment of Current Use of Lands and Resources for Traditional Purposes Effects, section 17.10; Chapter 21: Federal Cumulative Effects Assessment, section 21.4). However, as the Project is not predicted to adversely affect SFN's routes of access and transportation, there is no anticipated difference between SFN's ability to exercise its rights, with respect to access and transportation, between future conditions with the Project and future conditions without the Project.

20.6.5 Summary of Residual Effects on Saulteau First Nations' Aboriginal and Treaty Rights and Related Interests

The Project may adversely affect the ability of SFN members to exercise their hunting rights with respect to moose, and potentially grizzly bear, in the vicinity of the Project, due to disruption of movement. While residual cumulative effects on moose and grizzly bear are predicted to be not significant (minor), the exercise of SFN's Treaty 8 rights with respect to the quantity of wildlife may differ between future conditions with the Project and future conditions without the Project. In addition, the exercise of SFN's Treaty 8 hunting rights with respect to the experience of the

environment while hunting and the perceived quality of resources may differ between future conditions with the Project and future conditions without the Project.

The Project may affect SFN's fishing rights due to: reduced quality of fishing experience associated with Project-related noise and visual changes; and reduced perceived quality of fishing resources. The exercise of SFN's Treaty 8 rights may differ between future conditions with the Project and future conditions without the Project with respect to quality of experience while fishing and perceived quality of fish resources.

The success of SFN's gathering activities in the LSA may be adversely affected due to loss and alteration of harvestable plants in the LSA. SFN members may perceive reduced quality of resources gathered in the LSA, despite a prediction of no residual effects on country foods. While residual cumulative effects on harvestable plants are predicted to be not significant, the exercise of SFN's Treaty 8 rights with respect to berries, medicines, and other plants may differ between future conditions with the Project and future conditions without the Project. In addition, the exercise of SFN's Treaty 8 gathering rights with respect to the experience of the environment while gathering and the perceived quality of gathered resources may differ between future conditions with the Project and future conditions without the Project.

SFN cultural, spiritual and ceremonial resources could be adversely affected by Project activities during Construction and Operation. Depending on their locations, a SFN sacred site, medicinal plant gathering area, and general trapping area may be adversely affected during site clearing and/or SFN access to the sites may be restricted during the life of the Project. The Project may adversely affect SFN cultural continuity related to teaching of children, due to sensory disturbance. Future conditions for the exercise of SFN's cultural, spiritual, and ceremonial treaty rights are expected to differ between future conditions with the Project and future conditions without the Project.

If SFN habitations (a previous cabin and a camping site) overlap with the Project footprint, the habitations could potentially be adversely affected due to site clearing activities during Construction. SFN members access to these sites will be restricted. Given these potential direct effects, SFN's exercise of its Treaty 8 rights with respect to habitation resources is may differ between future conditions with the Project and future conditions without the Project.

20.7 EFFECTS ASSESSMENT FOR THE MCLEOD LAKE INDIAN BAND

20.7.1 Consultation with the McLeod Lake Indian Band

20.7.1.1 Engagement Activities Undertaken by the Proponent

The Proponent began consulting with MLIB with respect to the Project and MLIB's Aboriginal and treaty rights and related interests upon acquiring the Murray River coal property in 2009. Consultation has consisted of a number of face-to-face meetings, correspondences, site visits, and a community information session. The Proponent has engaged in discussions with the MLIB on economic development and protocol agreements and discussions are continuing. The consultation record is described and documented in Chapter 2: Information Distribution and Consultation.

To assist MLIB's capacity to participate in the EA process, in April 2013, the Proponent agreed to fund a third party technical review of the Application/EIS, conducted by Pottinger-Gaherty Ltd. (PGL) on behalf of the WMFN, SFN, and MLIB. The third party review process provides an independent review of the technical issues associated with the Project and provides an opportunity to identify and resolve First Nations' concerns and issues. To date, PGL has: 1) held a community scoping meeting with the three First Nations to identify issues of concern; 2) provided the Proponent with a summary of issues, concerns and interests arising from the community scoping meeting; 3) provided comments on the Project's dAIR; 4) participated in Working Group meetings; 5) commenced technical review of Project baseline reports; and 6) provided comments on the EIS Guidelines.

The Proponent distributed a desk-based ethnographic research report (Appendix 17-B) to MLIB on November 1, 2012 for its review and comment and offered to undertake traditional knowledge and traditional use study (TK/TU) at that time. The Proponent developed a proposed research plan for a TK/TU for consideration of MLIB Chief and Council. MLIB informed the Proponent that it wished not to proceed with the TK/TU study until an MOU could be finalized. To date, the TK/TU study has not been initiated.

The Proponent wrote to MLIB On April 25, 2014 to provide members with a plain language summary of the proposed Project and to summarize the types of information that will be included in the Application/EIS. The latter document outlined the Proponent's understanding of MLIB's Aboriginal and treaty rights and related interests as related to the Project, issues and concerns raised by MLIB with respect to the Project, valued components of potential interest to MLIB, and the Proponent's proposed approach to assess potential impacts of the Project on MLIB's Aboriginal and Treaty rights and related interests. To date, MLIB has not provided a response to the Proponent.

The Proponent will continue engage with MLIB throughout the Application/EIS review period as outlined in the First Nations Consultation Plan and Chapter 2. The Proponent will continue to seek information from MLIB about Aboriginal and treaty rights and related interests that may be impacted by the Project and means to avoid, mitigate, or otherwise accommodate any potential impacts.

20.7.1.2 Overview of the McLeod Lake Indian Band's Comments and Concerns

MLIB have raised the following key concerns about the Project:

- Potential effects on hunting, fishing, trapping, and gathering;
- Potential effects on caribou and other wildlife;
- Potential effects on water use and water quality;
- Potential effects on fish and fish habitat;
- Potential effects on plant health;
- Potential effects on spiritual and ceremonial sites; and
- Potential effects related to noise and visual/aesthetic quality.

A detailed list of MLIB's comments and concerns, and the Proponent's responses, are located in Appendix E of Chapter 2. Issues and concerns raised by WMFN that specifically relate to WMFN's Aboriginal and treaty rights and related interests are identified within each assessment topic in Section 20.7.4.

20.7.1.3 Responses Provided by the Proponent

During meetings and through correspondence, the Proponent provided MLIB with further information about the Project, including how the Project design will minimize wildlife habitat effects by creating a small footprint, utilizing already disturbed land, and using existing access roads. The Proponent informed MLIB of its decision to make a substantial change from an approximately four kilometre overland conveyor that would cross Murray River to a second underground decline under Murray River, and how this change will reduce potential effects to wildlife mobility associated with linear developments, fish habitat, and archaeological sites. In response to MLIB's and other Aboriginal groups' comments, the Proponent made a number of changes to the Project's draft Application Information Requirements, including: modification of fish and fish habitat VCs to be more inclusive of all potential fish species, including Arctic Grayling; adding dust deposition to a list of contaminants; expanding the spatial extents of the groundwater model; inserting of a description of wetland functions to be assessed; and including of bullet point indicating the exposure to contaminants will be assessed as a potential effect to wildlife VCs.

A detailed list of MLIB's comments and concerns, and the Proponent's responses, are located in Appendix E of Chapter 2. Section 20.7.4 provides a detailed assessment of the potential Project effects on WMFN's Aboriginal and treaty rights and related interests.

20.7.1.4 Future Planned Engagement Activities

The Proponent will continue engage with MLIB throughout the Application/EIS review period as outlined in the First Nations Consultation Plan, Chapter 2 of the Application/EIS, and the scope of the third party review process provided to the Proponent by PGL. Planned engagement activities with MLIB include:

- Responding to technical comments on the Application/EIS submitted to the Proponent by MLIB's third party technical reviewer (PGL);
- Arranging teleconferences with SFN's third party technical review (PGL) to resolve outstanding technical issues;
- Arranging higher level workshops with MLIB to discuss and resolve issues that cannot be resolved at the technical level;
- Responding to SFN's formal comments on the Application/EIS; and
- Arranging meetings with MLIB to discuss potential adverse effects of the Project on MLIB's Aboriginal and treaty rights and related interests, if any, and proposed mitigation measures.

20.7.2 Baseline Conditions

20.7.2.1 Traditional Territory and Reserves

MLIB has 21 reserves with a combined area of approximately 20,000 hectares. The main MLIB community is situated on McLeod Lake 1, approximately 145 km north of Prince George and approximately 125 km west of the Project area (Figure 20.3-1).

MLIB adhered to Treaty 8 in April 2000 (2000). MLIB defines a traditional territory of approximately 108,000 km^2 within Treaty 8 (McLeod Lake Indian Band nd) (Figure 20.7-1). The boundaries are: "to the south, the height of land separating the Arctic and Pacific watersheds near Summit Lake; to the east, following that height of land to the border of British Columbia and Alberta; to the north, following the border to the Peace River, west, following the southern bank of the Peace River to Williston Lake, south, following the western bank of Williston Lake to the western bank of Manson Arm, south, along the west bank of Manson Arm , southwest and west, along the height of land between Manson River and Eklund Creek and Jackfish Creek, southwest; and, to the west, along the height of land between the Nation River watershed and the Omineca River watershed, south and east along the height of land separating the Arctic and Pacific watersheds to the commencement point" (cited in Big Sky Consulting Ltd. and Site C First Nations Engagement Team 2013).

20.7.2.2 Ethnography and Language

MLIB members are of Tsek'ehne descent. Of the total MLIB population in 2012/2013, 10 members (2%) could speak and understand Tsek'ehne fluently, 30 (6%) could understand and/or speak Tsek'ehne somewhat, 463 (92%) could not speak or understand Tsek'ehne, and 62 (12%) members were learning the language (First Peoples' Language Map of BC 2012/2013).

20.7.2.3 Population and Governance

As of 2012, MLIB had a total of 512 registered members, with 377 living off-reserve (AANDC 2012). Off reserve members live in neighbouring communities of Mackenzie, Prince George, and Chetwynd, as well as other BC communities and elsewhere.

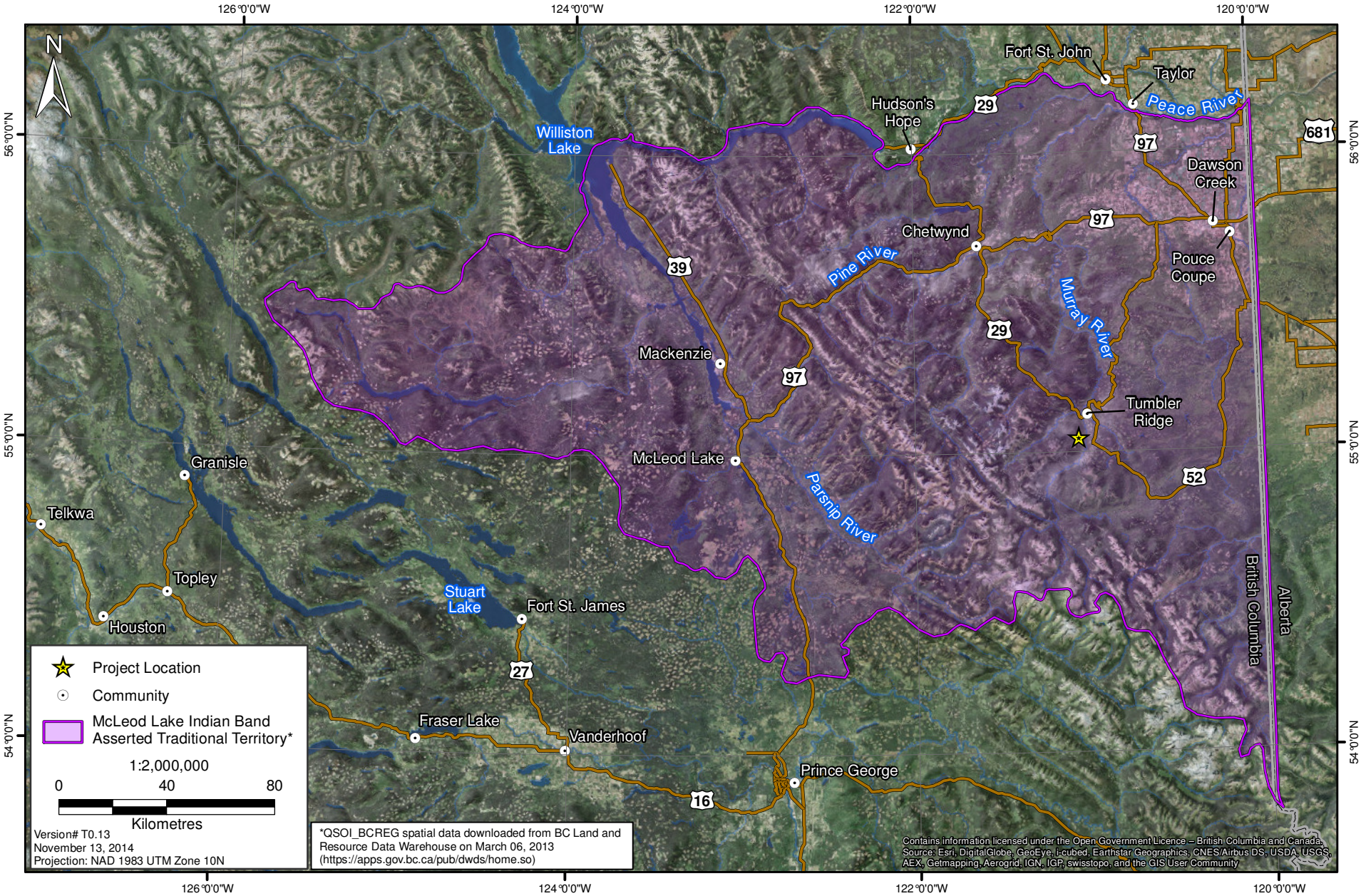
MLIB is governed by a Chief and six Councilors (two on-reserve, two off-reserve, an elder Councillor and a youth Councillor), who are elected under a custom electoral system every three years. MLIB is currently negotiating a self-governance agreement with BC and Canada through the BC Treaty Commission. The three parties have completed stage two ("Readiness") of the six stage process (BC Treaty Commission n.d.).

20.7.2.4 Economy

MLIB continues to engage in a non-market subsistence economy. In addition, the Band engages in a number of market-based economic activities.

MLIB has an economic and community development agreement with BC with respect to the Mt. Milligan Mine project. The agreement shares resource revenue received by BC from the Mt. Milligan project under the *Mineral Tax Act*.

Figure 20.7-1
McLeod Lake Indian Band Traditional Territory



MLIB owns and manages a number of businesses. Duz Cho Logging Ltd. is one of the largest logging contractors in northern B.C. Duz Cho Construction LP specializes in site development, road access, and reclamation for oil and gas, energy, and mining projects.

Most on-reserve MLIB members are employed in public administration, followed by agriculture, forestry, fishing and hunting. Within those sectors, MLIB members work in business, finance, and administration; education, law and social, community and government services; sales and services; trades, transport and equipment operation; and natural resources, agriculture and related production (Statistics Canada 2013c). The MLIB on-reserve unemployment rate was approximately 22% in 2011.

20.7.2.5 Land Use Setting and Planning

MLIB members continue to use their territory for hunting, trapping, fishing, and gathering (A. Ridington 2013).

MLIB have ratified a McLeod Lake Land Code under the Framework Agreement on First Nations Land Management. This agreement provides a framework for participating First Nations to establish regimes to manage their lands and resources as an alternative to land administration sections of the Indian Act (Turtle Island Native Network 2003).

In 2006, MLIB reached a five-year agreement with the Province that provides access to 175,000 cubic metres of wood in both the Mackenzie and Prince George Timber Supply Areas. The volume augments the band's existing harvesting operations under Duz Cho Logging (McLeod Lake Indian Band nd).

In 2008, the Ministry of Energy, Mines and Petroleum Resources, MLIB, and the B.C. Oil and Gas Commission signed a consultation agreement that defines the roles, responsibilities and processes for consultation on oil and gas applications. The agreement replaces the 2002 consultation and is for a three-year term, with provisions for extension until April 30, 2013 (McLeod Lake Indian Band nd).

20.7.2.6 Summary of Treaty Rights and Related Interests Held by the McLeod Lake Indian Band

The MLIB adhered to Treaty 8 in 2000 under the Treaty No. 8 Adhesion and Settlement Agreement, establishing treaty rights to hunt, trap, and fish in their traditional territory within Treaty 8. MLIB describe their Treaty rights in the terms stated in Treaty 8, i.e. "they shall have the right to pursue their usual vocations of hunting, trapping, and fishing throughout the tract surrendered" (Peeling 2012).

20.7.2.7 Past, Present and Anticipated Future Uses of the Project Area by the McLeod Lake Indian Band

Consultation efforts to date has not yielded primary information regarding MLIB members' past, present or future use of the Project area. A review of archaeological and publically-available information provides general evidence of use in the area.

The Assessment of Heritage Effects (Chapter 19) documents 72 known prehistoric archaeological sites within the assessment's RSA (Figure 19.5-1). Most of these sites are related to use of the landscape for activities such as hunting and resource gathering. Lithic scatters (scatters of stone tools and stone

waste chips) are the most common archaeological site types found in the RSA. It is not known whether any of these sites were produced by the ancestors of MLIB.

The Tsek'ehne were historically a nomadic hunting and gathering people, and commonly pursued game over vast territories. They generally spent the period from about November until mid-summer on the plateaux and Rocky Mountain slopes, running down caribou and moose on the snow and, when the snow had melted, driving them into snares. Large game was plentiful on the eastern side of the mountains from late fall to early spring. About mid-summer, they resorted to the lakes to fish, predominantly on the western side of the mountains. Fishing figured more predominantly in their traditional economy than their Dane-zaa neighbours to the east. (Jenness 1937; Lamb 1957).

Up until the 1960s (before the creation of Williston Lake), many MLIB families followed an annual cycle of land use practices similar to previous generations. Small family groups of various compositions would spend much of the fall, winter, and early spring on traplines. In the summer, band members would congregate at McLeod Lake. From this main village, most people would spread out on the land to hunt, fish and gather plant resources through the summer and early fall. Once winter set in, many people would return to the traplines, where they would trap for furs as well as continue with hunting, fishing and food preservation (Golder Associates 2009).

While immediate relatives often returned to the same trapline year after year, occasionally more distant relatives, or friends from local or neighbouring communities, would join them on the trapline. Hunting, fishing, and plant harvesting activities were even more flexible than trapline use, with different groups of family members and friends utilizing different areas within an overall traditional territory from year to year (Golder Associates 2009).

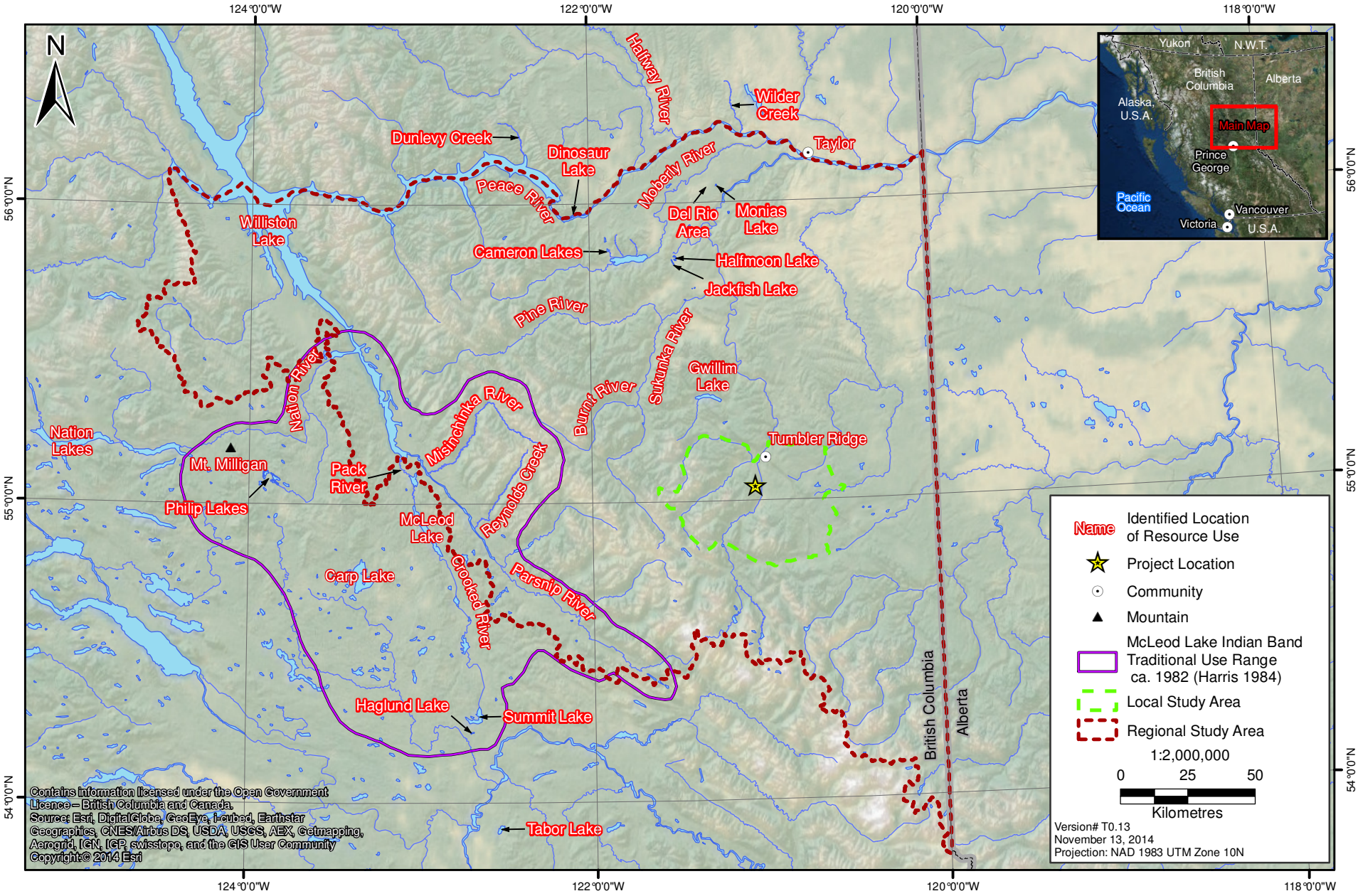
MLIB members continue to hunt and trap throughout their traditional territory (Figure 20.7-2). Species hunted include moose, elk, deer, bear, marmot, beaver and rabbit. Birds hunted include grouse, ptarmigan, geese, and ducks. Species trapped include beaver, squirrel, marten, mink, fisher, otter, lynx, wolves, coyote and fox (Traditions Consulting Services 2013b). Hunting areas include the south side of the Peace River from Hudson's Hope to Taylor north of the Pine River, between Chetwynd and the east end of Moberly Lake east to the Pine River, the lower reaches of Dunlevy Creek, small areas around the lower Pingel Creek and Eight Mile Creek east of Taylor, and a small area south of the Halfway River Reserve. The areas utilized within the territory depend upon resource abundance, disturbance caused by industrial activities, and other factors (A. Ridington 2013).

MLIB hunters harvest waterfowl, including western Canada goose, mallard, pintail, blue and green wing teal, and greater and lesser scaup. Waterfowl are hunted on the wetlands north of the lower Moberly River, at the slough on the south side of the Peace River opposite Wilder Creek (geese, teal, pintail, wigeon, scaup) and at the mouth of Halfway River (geese, mallard, pintail, teal). Grouse (sharp-tailed, spruce, ruffed) are hunted in the area north of Monias Lake16 and the Del Rio area.(A. Ridington 2013).

MLIB members fish for bull trout, rainbow trout, and dolly varden in the Peace River, at the mouth of the Halfway River, on Dinosaur Lake (rainbow trout and dolly varden) and on the lower Beatton River. There are no known MLIB fishing locations within the vicinity of the Project (i.e. the LSA for the Assessment of Current Use of Lands and Resources for Traditional Purposes) (A. Ridington 2013).

Figure 20.7-2

McLeod Lake Indian Band - Locations of Traditional and Current Land Use



MLIB members gather berries and plants in their traditional territory. Berries harvested by MLIB members include blueberries, soapberries, huckleberries, low bush and high bush cranberries, saskatoon berries, strawberries, raspberries, chokecherries, currants and gooseberries. Plants harvested by MLIB members, primarily from wetlands, include Labrador tea, mint tea, devil's club, strawberries, juniper, violet, fireweed, red willow, jack pine, balsam, pine bark and pine sap. There are no known gathering locations within the vicinity of the Project (i.e. the LSA for the Assessment of Current Use of Lands and Resources for Traditional Purposes) (A. Ridington 2013).

There are no known MLIB trails or habitations within the vicinity of the Project (i.e. the LSA for the Assessment of Current Use of Lands and Resources for Traditional Purposes).

There are no known heritage sites within the vicinity of the Project (i.e. the LSA for the Assessment of Current Use of Lands and Resources for Traditional Purposes).

MLIB members indicated that they will continue to practice their Aboriginal and treaty rights and related interests in the future, but they do express concerns that industrial developments will curtail their ability to exercise their treaty rights and related interests due to changes in access, impacts on resources, habitat fragmentation and destruction, and increased non-Aboriginal presence in harvesting areas (Traditions Consulting Services 2013b).

20.7.3 Scope of the Assessment

20.7.3.1 Valued Components Suggested by the McLeod Lake Indian Band for Inclusion in the Application/Environmental Impact Statement

During a community scoping meeting held by WMFN, SFN, and MLIB on April 16, 2013, community members identified the following VCs, in addition to those already identified in the AIR, for inclusion in the Application/EIS:

- **Atmosphere**: climate;
- **Fish and Fish Habitat:** arctic grayling;
- **Terrestrial Ecology:** plant health;
- **Wildlife and Wildlife Habitat**: little brown bat, gosling hawk, swans, reptiles (snakes), wolverine, green-throated warbler, wildlife health;
- **Social**: aesthetics, treaty rights; and
- **Human Health**: community and worker health and safety.

Chapter 6: Assessment of Air Quality and Greenhouse Gases Effects does not include climate as a VC as current scientific knowledge does not allow for the effects of any individual project on climate change to be assessed due to the global scale, uncertainty, and complexity of assessing effects of collective anthropogenic greenhouse gas emissions on climate. Instead, the chapter assesses the potential of the Project to produce greenhouse gases, which are compared with sector, provincial, federal, and international levels, consistent with guidance by the CEA Agency.

Chapter 9: Assessment of Fish and Fish Habitat Effects includes Arctic Grayling as a VC.

Chapter 11: Assessment of Terrestrial Ecology Effects includes Harvestable Plants as a VC.

Chapter 13: Assessment of Wildlife Effects includes the little brown bat within the Bats VC, gosling hawk within the Raptors VC, swans within the Waterbirds VC, wolverine within the Furbearers VC (fisher as a representative species), green-throated warbler within the Songbirds VC (black-throated warbler as a representative species). Reptiles were excluded as a VC as there are no reptile species of conservation concern in the area and the assessment of other terrestrial species acts as a proxy for snakes. Wildlife health is not included as a VC as this is a general concept that is captured by the specific wildlife assessments.

Chapter 16: Assessment of Non-traditional Land Use Effects excludes aesthetics as a VC, but includes changes in visual quality as potential effects to other VCs.

Chapter 15: Assessment of Social Effects does not include community and worker health and safety as a VC as the Project will be required to operate under the *Health, Safety and Reclamation Code for Mines in BC*. Community safety is addressed under the Crime and Other Social Problems VC.

This chapter (Chapter 20: Assessment of Aboriginal and Treaty Rights and Related Interests) assesses potential Project effects on treaty rights.

20.7.3.2 Incorporation of the McLeod Lake Indian Band Traditional Knowledge and other Views into the Assessment

MLIB's views regarding potential environmental effects of the project were incorporated into Project design (Section 20.7.1.3) and assessment methodology (Section 20.7.3.1).

20.7.3.3 Identification of Measurable Parameters

Consultation efforts to date has not yielded information about MLIB's understanding of factors influencing its members' ability to exercise their Aboriginal and treaty rights and related interests. A review of publically-available information reveals key values relating to MLIB's exercise of its Treaty 8 rights and related interests (A. Ridington 2013). Key categories include:

- transportation (for hunting and fishing; e.g. truck, foot, boat);
- habitation (e.g. camp sites);
- fishing (e.g. bull trout, dolly varden);
- hunting (e.g. elk, moose, deer);
- gathering (e.g. berries);
- other heritage values (e.g. Tse'khene cultural landscapes, historical connection, archaeological heritage); and
- historic trails (e.g. Pine Pass Trail).

Since there are no known MLIB transportation routes, habitation sites, fishing sites, gathering sites, heritage values, or trails in the vicinity of the Project (i.e., within the LSA defined in the Assessment of Current Use of Lands and Resources for Traditional Purposes Effects), the following assessment relates only to the potential of the Project to adversely affect MLIB's ability to exercise its treaty rights to hunt within its traditional territory.

20.7.4 Assessment of Effects on the McLeod Lake Indian Band's Treaty Rights and Related Interests

20.7.4.1 Hunting

Consultation efforts to date (Section 20.7.1 and Chapter 2) and a review of publicly available information has not indicated that MLIB members undertake hunting activities in the vicinity of the Project. As described in Section 20.7.3, publically-available information indicates that MLIB members hunt in an area to the east of Tumbler Ridge. The Proponent has not obtained information about which species are harvested in this area by MLIB members

During a meeting with the MLIB Land Referral Office on June 19, 2012, MLIB Land Referral Office representatives noted MLIB interests in overall safety, hunting, trapping, and fishing. Representatives asked a question about the Proponent's caribou management plan. Representatives stated that MLIB members use "the mountains" for caribou hunting, grizzly hunting, gathering of medicinal plants, and berry picking. During an April 16, 2013 community meeting with the MLIB, WMFN, and SFN (facilitated by the three Aboriginal groups' third party reviewer), community members raised concerns about:

- Potential impacts to caribou habitat;
- Potential impacts on migration patterns, sensitive lifecycle periods, and health of wildlife; and
- Potential impacts of the Project's conveyor belt on wildlife.

Community members during the April 2013 community meeting suggested seven wildlife VCs in addition to VCs proposed by the Proponent, including: Little Brown Bat, Gosling Hawk, swans, reptiles (snakes), Wolverine, Green-Throated Warbler, and wildlife health.

The Assessment of Wildlife Effects (Chapter 13) assessed effects of the Project on caribou, moose, mountain goat, elk, grizzly bear, furbearers, bats, raptors, songbirds, waterbirds, and amphibians. The Project is not predicted to result in significant adverse effects to caribou, as caribou are a high elevation species and the Project is located at a low elevation in a valley. Effects on elk are predicted to be negligible, as the Project will result in a relatively small direct and functional (i.e. sensory disturbance-related) loss of habitat and/or disruption to movement. The Project is not predicted to result in significant adverse effects to wildlife health resulting from contamination soil or water contamination (Chapter 18: Assessment of Health Effects). The Project design no longer includes an overland conveyor belt. The Project is not predicted to result in significant adverse effects to human health in relation to the consumption of country foods (Chapter 18: Assessment of Health Effects).

The Project is predicted to adversely affect the migration patterns of grizzly bears and furbearers, due disruption of movement (Chapter 13: Assessment of Wildlife Effects). Mitigation measures proposed by the Proponent include: giving wildlife the right-of-way along access roads and the highway and enforcing speed limits along on-site Project roads.. Effects of disruption to movement on grizzly bears are predicted to be not significant as grizzly bears have very large home ranges and move across the landscape continuously and have a variety of habitats that they use for movement. The effect will be reversible once operations cease. Effects of disruption of movement on furbearers are predicted to be not significant as some riparian habitat is anticipated to be undisturbed within the Mine Site Assessment Footprint that would continue to allow furbearer movement past the Project area. The effect is reversible over the long term through reclamation activities.

Other current and reasonably foreseeable projects in the region were assessed for their potential to interact with the Project to create cumulative effects on wildlife (Chapter 13: Assessment of Wildlife Effects, section 13.11; Chapter 21: Federal Cumulative Effects Assessment, section 21.12). The cumulative effects assessment identified residual cumulative effects for moose and grizzly bear. Residual cumulative effects for moose include reduction in available high-quality habitat and reduced movement of moose along the Murray River. The residual cumulative effect for grizzly bear is reduced movement of grizzly bear along the Murray River.

Past and present developments in the RSA have resulted in the loss and alteration of 4.9% and 3.5% of moose habitat, respectively. The Project will remove and alter an additional 0.2% and 0.7% of late winter habitat. Additional future projects will remove and alter an additional 0.9% and 3.1% of moose late winter habitat. The majority of future effects are due to, in decreasing order: wind power projects, oil and gas, and mining. The total area of habitat removed due to all past, present and future activities is 1,178 ha of winter habitat, or 5.9% of the high quality habitat in the RSA. Assuming a moose density of 0.003 moose/ha, this area is equivalent to the home ranges of 3.5 moose.

The cumulative effect on moose habitat is rated as not significant (minor) for the following reasons:

- the cumulative effect will result in a relatively small amount of habitat loss;
- several forms of habitat alteration are beneficial to the moose population;
- the effect is reversible as both forestry and most mining operations are suitable for reclamation post-closure;
- the resiliency of the moose population to disturbed and fragmented habitat is relatively high; and
- moose are common throughout BC.

The distribution of infrastructure along Murray River due to mining and forestry operations was evaluated as a residual cumulative effect on the disruption of movement of moose north and south through the Murray River corridor. The Wolverine River corridor will be relatively unaffected by the Project, with the exception of rail traffic twice a day. The combination of all past, present and future activities on the MRRMZ will result in the removal of 9.8% (155 ha) of winter habitat and the further alteration of an additional 14.2% (224 ha) of habitat.

The cumulative effect of disruption of moose movement is assessed as not significant (minor) for the following reasons:

- the residual effect of disruption of moose movements is expected to have a minor magnitude;
- the effect will be reversible long term because of reclamation activities of development areas along the Murray River;
- the resiliency of the moose population to disturbed and fragmented habitat is relatively high;
- moose are common throughout BC.

Currently, 11.2% of grizzly bear spring habitat has been lost in the Murray River Resource Management Zone (MRRMZ), largely due to transportation corridors and 34.3% has been altered, largely by forestry. The addition of the Murray River project would remove an additional 2.3% and alter an additional 1.2% of spring habitat for grizzly bears in the MRRMZ. Additional future projects, largely oil and gas, may cause the loss and alteration of an additional 3.4% and 6.7% of spring habitat for a total of 17% lost and 42% altered. Note that the altered habitat is largely forestry cutblocks and pipeline rights of way, which grizzly bears may use to forage or movements (Nielsen et al. 2004).

The cumulative effect of disruption to grizzly bear movement is assessed as not significant (moderate) for the following reasons:

- Due to the relatively high proportion of habitat lost and altered in the MRRMZ, the magnitude of the effect is rated as medium. However, this effect is mitigated, to some degree, by the movement habits of grizzly bears. Bears have very large home ranges and move across the landscape continuously and have a variety of habitats that they use for movement, including riparian, mid elevation and alpine;
- It is not expected that this effect will have local or regional population-scale effects; and
- The effect will be reversible in the long-term once the projects end. Bears may temporarily avoid habitats where there is a barrier to their movement, but are expected to re-occupy the habitat once the disturbance is removed.

MLIB members are not known to currently hunt in the Project footprint, but do hunt moose east of Tumbler Ridge (Section 17.4.4.2). Project-related adverse effects on moose due to habitat loss and disruption of movement, while not significant, may reduce MLIB's moose hunting opportunities in the LSA. While residual cumulative effects on moose are predicted to be not significant (minor), the exercise of MLIB's Treaty 8 rights with respect to the quantity of wildlife may differ between future conditions with the Project and future conditions without the Project.

In addition, should MLIB members choose to hunt within close proximity to the Project, the exercise of MLIB's Treaty 8 hunting rights may be affected due to Project-related sensory disturbance (Section 17.7).

Other foreseeable future mining, hydroelectric, and other commercial activities, such as oil and gas exploration have the potential to act cumulatively with the Project by adding to the visual and auditory changes in the LSA. This is a spatial/temporal crowding effect in that it reduces the number of hunting and trapping locations in the LSA considered to be free of auditory or visual disturbances (Section 17.10.2.6).

Consequently, the exercise of MLIB's Treaty 8 hunting rights with respect to the experience of the environment while hunting may differ between future conditions with the Project and future conditions without the Project.

The Proponent will implement the following mitigation measures to minimize the above effects:

- work with Aboriginal groups to facilitate their participation in ongoing monitoring, during pre-mine, during construction and operations, and post-mine periods.
- work to maintain Aboriginal groups' continuity of use via ongoing monitoring to prevent the creation of 'avoidance areas' for Aboriginal peoples.
- engage in ongoing communication with Aboriginal groups, including translation of technical reports for Aboriginal membership

20.7.5 Summary of Residual Effects on the McLeod Lake Indian Band's Treaty Rights and Related Interests

Project-related adverse effects on moose due to habitat loss and disruption of movement, while not significant, may reduce MLIB's moose hunting opportunities in the LSA. While residual cumulative effects on moose are predicted to be not significant (minor), the exercise of MLIB's Treaty 8 rights with respect to the quantity of wildlife may differ between future conditions with the Project and future conditions without the Project. In addition, should MLIB members choose to hunt within close proximity to the Project, the exercise of MLIB's Treaty 8 hunting rights may be affected due to Project-related sensory disturbance. The exercise of MLIB's Treaty 8 hunting rights with respect to the experience of the environment while hunting may differ between future conditions with the Project and future conditions without the Project.

20.8 EFFECTS ASSESSMENT FOR BLUEBERRY RIVER FIRST NATIONS

20.8.1 Consultation with Blueberry River First Nations

20.8.1.1 Engagement Activities Undertaken by the Proponent

The Proponent met with the Chief and Council of BRFN on October 15, 2013 to provide an overview Project and to understand and discuss BRFN's Aboriginal and treaty rights and related interests, as well as BRFN's engagement preferences. The Proponent provided BRFN with an information package, including Project description, EIA Guidelines, AIR, list of studies to be completed, BC EAO First Nations consultation plan. The consultation record is described and documented in Chapter 2: Information Distribution and Consultation.

The Proponent wrote to BRFN On April 25, 2014 to provide members with a plain language summary of the proposed Project and to summarize the types of information that will be included in the Application/EIS. The latter document outlined the Proponent's understanding of BRFN's Aboriginal and treaty rights and related interests as related to the Project, issues and concerns raised by BRFN's with respect to the Project, valued components of potential interest to BRFN, and the Proponent's proposed approach to assess potential impacts of the Project on BRFN's Aboriginal and Treaty rights and related interests. To date, BRFN has not provided a response to the Proponent.

The Proponent will continue engage with BRFN throughout the Application/EIS review period as outlined in the First Nations Consultation Plan and Chapter 2. The Proponent will continue to seek information from BRFN about Aboriginal and treaty rights and related interests that may be impacted by the Project and means to avoid, mitigate, or otherwise accommodate any potential impacts.

20.8.1.2 Overview of Blueberry River First Nations' Comments and Concerns

BRFN has not raised any concerns about the Project.

20.8.1.3 Future Planned Engagement Activities

The Proponent will continue engage with BRFN throughout the Application/EIS review period as outlined in Chapter 2 of the Application/EIS. Planned engagement activities with MLIB include responding to BRFN's formal comments on the Application/EIS and arranging meetings with BRFN to discuss potential adverse effects of the Project on BRFN's Aboriginal and treaty rights and related interests, if any, and proposed mitigation measures.

20.8.2 Baseline Conditions

20.8.2.1 Traditional Territory and Reserves

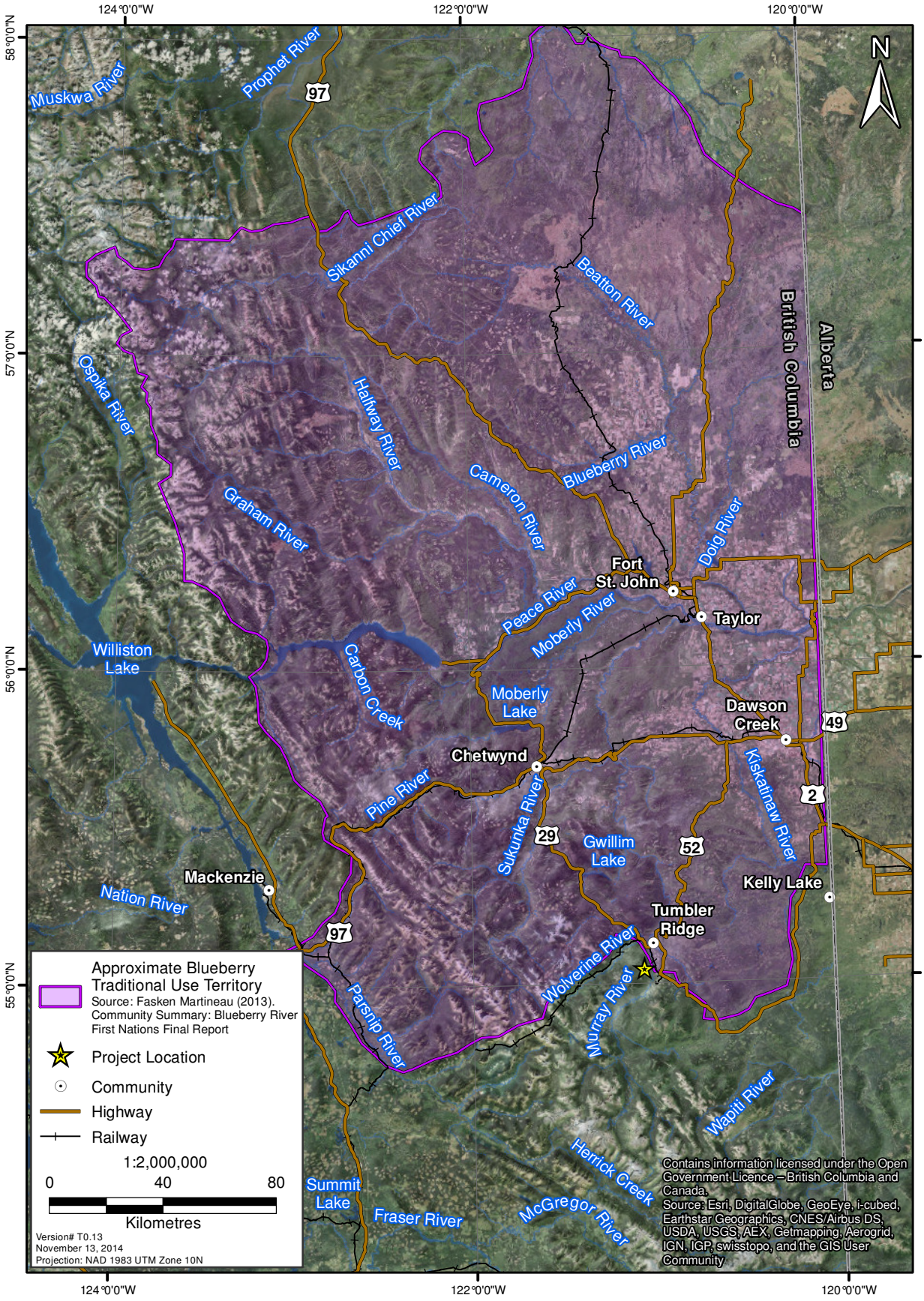
BRFN has two reserves (Blueberry River 205, and the south half of Beaton River 204) totalling 1,508.8 ha (AANDC 2013). BRFN's main community is Blueberry River 205, located approximately 80 km northwest of Fort St. John and approximately 180 km north of the Project area (Figure 20.3-1).

BRFN defines its traditional territory within the larger Treaty 8 lands (Figure 20.8-1). The territory incorporates areas of documented historical, current, and ongoing use by BRFN members (Blueberry River First Nations 2012). The traditional territory of BRFN is described as extending as far north as the confluence of the Sikkani Rier and Ft. Nelson Rivers; west as Sikanni Chief Lake and Peach Reach on the Williston Reservoir, south as Tacheeda Mountain and Quintette Mountain; and east to the BC-Alberta border with the reasonable prospect of the territory extenting into the Peace region within Alberta (Figure 20.2-4) (Blueberry River First Nations 2012).

BRFN, together with Doig River First Nation, submitted a treaty land entitlement claim to Canada regarding alleged shortfalls in their original Treaty 8 land entitlements. Canada accepted the claim and BC has agreed to participate in negotiations to resolve the claims.

Figure 20.8-1

Blueberry River First Nations Traditional Territory



20.8.2.2 Ethnography and Language

BRFN are of Dane-zaa decent. Of the total BRFN population of 472, an estimated 24 members (5%) speak and understand Dane-zaa fluently and 15 individuals (3%) somewhat understand and/or speak the language (First Peoples' Language Map of BC n.d.-a). The primary non-Aboriginal language spoken in the community is English.

20.8.2.3 Population and Governance

As of June 2014, BRFN had a registered membership of 472 members, with 188 members living on their own reserves, 37 members living on other reserves, and 247 members living off-reserve (Aboriginal Affairs and Northern Development Canada n.d.-a). BRFN' on-reserve population increased by approximately 12% between 2006 and 2011(Statistics Canada 2012a).

Prior to 1977, BRFN was joined with the Doig River First Nation in the Fort St. John Indian Band. BRFN are governed by a Chief and four Councillors, elected under the *Indian Act* election system.

20.8.2.4 Economy

BRFN continue to engage in a non-market subsistence economy. In addition, the Nations engage in economic activities, primarily in the public sector.

BRFN operate Blueberry River Enterprises GP Ltd., a company specializing in construction, alteration, repair and development of earthwork projects (Blueberry River Enterprises GP Ltd. n.d.).

BRFN entered into an Economic Benefits Agreement with BC in 2006. The Nations terminated the agreement in 2013, citing BC's failure to consider the cumulative effects of resource development in its traditional territory (Stoldalka 2013).

The majority of on-reserve members are employed in public administration. BRFN workers' primary occupations include: business, finance and administration occupations; natural and applied sciences and related occupations; and occupations in education, law and social, community and government services. The on-reserve BRFN unemployment rate is approximately 33% (Statistics Canada 2013).

20.8.2.5 Land Use Setting and Planning

BRFN traditionally used their traditional territory for hunting, fishing, gathering, and travel. Currently, BRFN members use their territory for big and small game hunting, fishing, bird hunting, gathering, and cultural revival camps (BC Hydro Power and Authority 2013b).

In 2005, BRFN entered into a Negotiation Protocol Agreement with BC, in which they agreed to negotiate and attempt to reach agreements on the management of natural resources (among other outstanding issues). BRFN signed four land use agreements with BC in 2007, including a Strategic Land Use Planning Agreement, a Long-Term Oil and Gas Agreement, a Forestry Agreement, and a Mining and Minerals Protocol Agreement. The latter agreement established a process for consultation with respect to coal tenure applications and mining activity applications in the BRFN Consultation Area. The Consultation Area lies north of Hudson's Hope and outside of the Project area

20.8.2.6 Summary of Treaty Rights and Related Interests Held by Blueberry River First Nations

BRFN (the Fort St. John Indian Band) adhered to Treaty 8 in 1900 establishing treaty rights to hunt, trap, and fish in their traditional territory within Treaty 8. BRFN describes Treaty 8 as guaranteeing "the right to fish, hunt, gather and practice their traditional vocations through the entirety of the Treaty # 8 area" (Blueberry River First Nations 2012). BRFN elaborates this view as follows:

> *From BRFN's viewpoint, this means that their community members have the ability to exercise their rights anywhere within the Treaty #8 area, even if they have not elected to exercise such rights in particular location and area on a prior occasion. Thus within the treaty context, treaty rights are deemed to be portable and attached to the treaty beneficiary. The ability to travel and exercise such rights as and when needed and to make a livelihood from the land is critical given key factors that can also determine when and how rights or traditional vocations can be practically exercised. The availability and abundance of fish and wildlife, the movements and migration of fish and wildlife populations, seasonal and longer term climatic trends and the growing influence and impact of development are all factors that make the totality of Treaty #8 lands important to, and of interest to the BRFN.*

20.8.2.7 Past, Present and Anticipated Future Uses of the Project Area by Blueberry River First Nations

Consultation efforts to date has not yielded information about BRFN's past, present or anticipated future use of the Project area. The Assessment of Heritage Effects (Chapter 19) documents 72 known prehistoric archaeological sites within the assessment's RSA (Figure 19.5-1). Most of these sites are related to use of the landscape for activities such as hunting and resource gathering. Lithic scatters (scatters of stone tools and stone waste chips) are the most common archaeological site types found in the RSA. It is not known whether any of these sites were produced by the ancestors of BRFN.

Prior to contact, the Dane-zaa hunted and trapped a wide variety of species, including woodland caribou, moose, elk, mule deer, grizzly bear, black bear, goat, mountain sheep, hoary marmot, bison, porcupine, beaver, and fur bearing animals (Jenness 1937; R. Ridington 1968; Brody 1981). Bison were hunted on the prairies and woodlands beside the Peace River, caribou in the lower mountain ranges and parklands, and sheep and goats in the high mountains (R. Ridington 1968; Bouchard and Kennedy Research Consultants 2011). Wood bison were the most important food source prior to the mid-1980s; subsequently, moose gained primary importance and woodland caribou were important where available (Bouchard and Kennedy Research Consultants 2011). Rabbit, beaver, grouse, porcupine, and squirrel were relied upon particularly through lean times (Bouchard and Kennedy Research Consultants 2011). Dane-zaa relied on fishing to supplement game procured through hunting (R. Ridington 1968), catching species native to the region, including lake trout, bull trout, walleye, northern pike, burbot, Arctic grayling, and mountain whitefish (Treaty 8 First Nations Community Assessment Team and The Firelight Group Research Cooperative 2012; Site C First Nations Engagement Team 2013). Berries were not a key food source, but were collected and dried for winter use. Berries harvested included Saskatoon, huckleberries, blueberries, raspberries, gooseberries, crowberries and cranberries (Bouchard and Kennedy Research Consultants 2011). The cambium of poplar trees was consumed as were a few roots (Goddard 1916). Dane-zaa peoples followed a seasonal round characterized by five distinct periods: the

fall dry-meat hunt, early winter hunting and trapping, late winter hunting and trapping, spring beaver hunting, and the summer slack (Brody 1981).

Members of BRFN continue to hunt, fish, and gather plants within their traditional territory (Figure 20.8-2). Animals currently harvested by BRFN members include moose, elk, deer, mountain sheep, mountain goat, bison, black bear, beaver, muskrat, porcupine, rabbit, hoary marmot, squirrel, lynx, marten, fisher, and wolverine. While less important than game, BRFN members catch a variety of fish, including whitefish, dolly varden (bull trout), rainbow trout, grayling, lake trout, kokanee, ling (burbot), jackfish, sucker, walley, pike, and squawfish. BRFN members hunt a variety of birds, including waterfowl (Canada goose, mallard, goldeney, merganser) and grouse along many muskeg areas and small lakes within their traditional territory. Plants harvested by BRFN members include cranberries, huckleberries, saskatoons, chokecherries, blueberries, strawberries, cloud berries, mint, Labrador tea, cow parsnip, water parsnip, and the cambium layer of poplar (Bouchard and Kennedy Research Consultants 2011).

Hunting areas are generally concentrated north of the Peace River and west of Beatton river and at Pink Mountain (Brody 1981; Bouchard and Kennedy Research Consultants 2011). However, BRFN members also harvest wildlife south of the Peace River. Moose, elk, deer and bear are hunted on both sides of the Peace River. BRFN members hunt along the Pine River. Hunters harvest moose towards the Moberly River, as far south as the northeast end of Moberly Lake. A road past Boucher Lake leads to an area where BRFN members hunt both elk and moose. There is an important elk hunting area along the Pine River from the river mouth southwest to Monias, extending north to the Moberly River and along the road east to the environs of Boudreau Lake (Bouchard and Kennedy Research Consultants 2011).

South of the Peace River, Dolly Varden and rainbow trout are the most preferred species (Kennedy 2011). Key fishing areas south of the Peace River include Pine River, Moberly River, Moberly Lake, Cameron Creek. BRFN members noted fishing for walleye in Gwillim Lake near Tumbler Ridge and fishing for pike at Moberly Lake.

BRFN members collect raspberries, Saskatoons, blueberries and high bush cranberries along the Pine River.

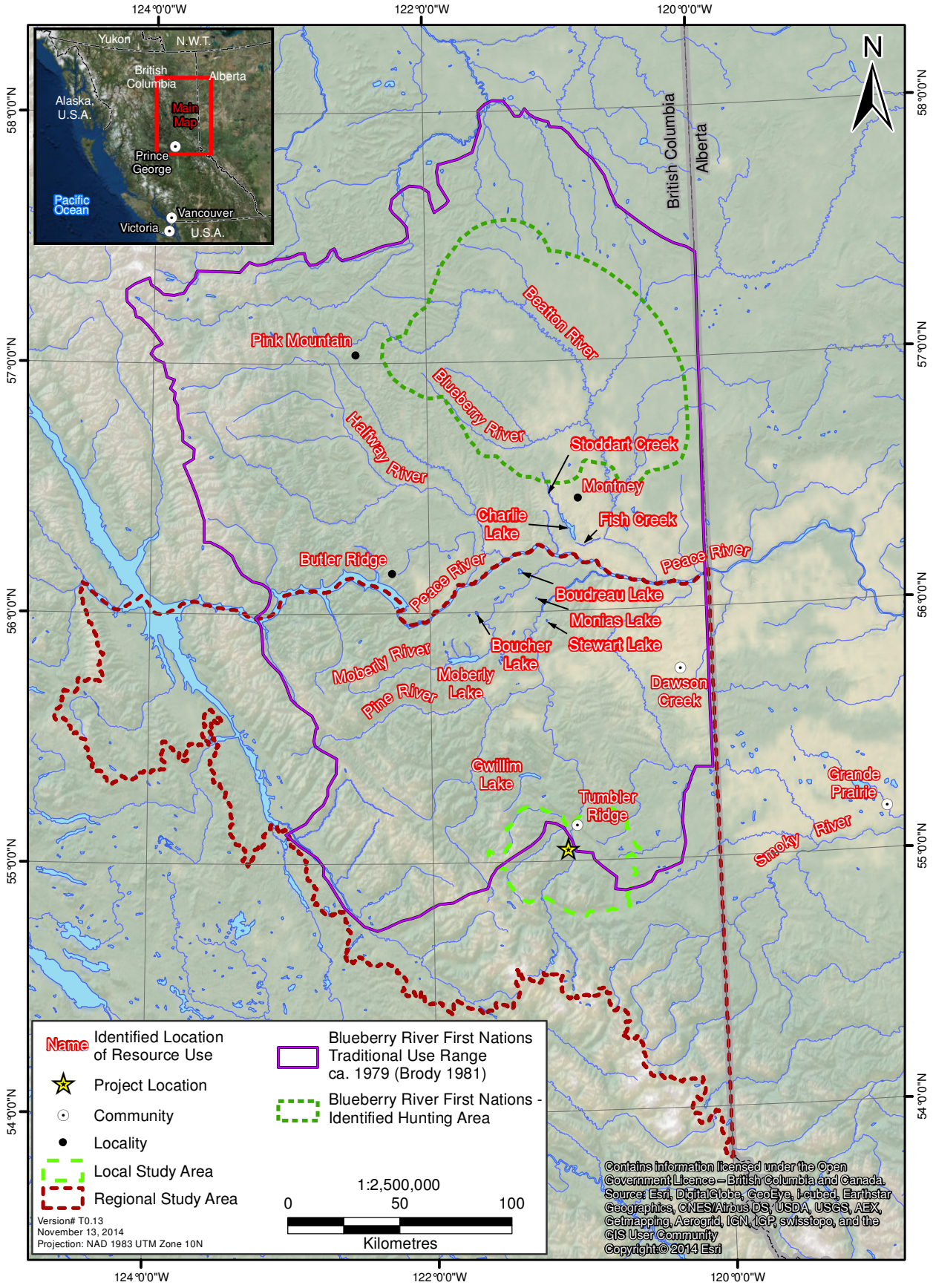
BRFN actively promotes the continuation of traditional resource harvesting activities by its members by holding annual "cultural revival camps"at Bear Flats and Pink Mountain, north of the Peace River. BRFN emphasizes that its Treaty 8 rights to hunt, trap, fish, and gather are portable within the Treaty 8 area, and that the location of the exercise of those rights depend on availability and abundance of fish and wildlife, the movements and migration of fish and wildlife populations, seasonal and longer term climatic trends and the growing influence and impact of development. Consequently, while it is likely that BRFN members will continue to engage in land use activities in areas currently used, members may use other areas in the future.

20.8.3 Scope of the Assessment

20.8.3.1 Valued Components Suggested by Blueberry River First Nations for Inclusion in the Application/Environmental Impact Statement

BRFN has not suggested VCs for inclusion in the Application/EIS

Figure 20.8-2
Blueberry River First Nations - Locations of Traditional and Current Land Use



20.8.3.2 Incorporation of Blueberry River First Nations' Traditional Knowledge and other Views Into the Assessment

The Proponent has not obtained information regarding BRFN's traditional knowledge. BRFN has not provided the Proponent with specific views about the Project.

20.8.3.3 Identification of Measurable Parameters

Consultation efforts to date have not yielded information about BRFN's understanding of factors influence its members' ability to exercise their Aboriginal and treaty rights and related interests. However, BRFN has identified key values relating to the exercise of its Treaty 8 rights and related interests in a traditional land use study undertaken for the Site C Clean Energy Project (Bouchard and Kennedy Research Consultants 2011)[3]. Key categories include:

- travel and access;
- hunting (big game, small game, and birds);
- fishing;
- gathering (plant foods and medicines); and
- cultural revival camps.

These categories were not broken down by BRFN into measurable parameters with which to assess potential effects on their Aboriginal and treaty rights and related interests. Consequently, the below assessment is based on parameters derived from other Aboriginal groups considered in this assessment (sections 20.6, 20.7, and 20.8) and the Assessment of Current Use of Lands and Resources for Traditional Purposes (Chapter 17). Key parameters include:

- quantity of resources relied upon for the exercise of Aboriginal and treaty rights and related interests;
- quality of resources relied upon for the exercise of Aboriginal and treaty rights and related interests;
- access to resources relied upon for the exercise of Aboriginal and treaty rights and related interests; and
- quality of experience related to the exercise of Aboriginal and treaty rights and related interests.

[3] The purpose of this study was to "assist in documenting the First Nations' traditional knowledge, use and occupancy for the purposes of assessing the [Site C Clean Energy] Project's potential impacts on BRFN's treaty rights and ability to continue practicing section 35(1) rights and traditional activities and interests."

20.8.4 Assessment of Effects on Blueberry River First Nations' Treaty Rights and Related Interests

20.8.4.1 Travel and Access

BRFN have not provided the Proponent with information about its members' travel and access routes, if any, in the vicinity of the Project. As described in Section 20.9.2, available information does not indicate that BRFN members currently travel to or access points in the vicinity of the Project, as determined with respect to the LSAs for the Assessment of Wildlife Effects (Chapter 13, Figure 13.6-1), the Assessment of Fish and Fish Habitat Effects (Chapter 9, Figure 9.6-1), the Assessment of Terrestrial Ecosystem Effects (Chapter 11, figure 11.6-1), and the Assessment of Heritage Effects (Chapter 19, Figure 19.5-2).

Outside of the Project footprint, which will restrict public access for safety reasons, the Project is not expected to impact access to hunting, fishing, or gathering areas. The Murray River FSR will continue to provide access to hunters on the west side of the Murray River and Highway 52 will continue to provide access to hunters on the east side of the Murray River. Fishing areas will remain accessible from the Murray River FSR and FSR bridge crossing. Chapter 16, Assessment of Land Use Effects did not identify any impacts on water navigation. The Proponent may need to temporarily close the Murray River FSR during construction to move mine equipment to the Project site. The Proponent will provide advance notice to Aboriginal groups about temporary road closures and also publish notices to advise the public of road closures. The road closures will be isolated incidences.

Other current and reasonably foreseeable projects in the region have the potential to adversely affect BRFN's routes of access and transportation in the future (Chapter 17: Assessment of Current Use of Lands and Resources for Traditional Purposes Effects, section 17.10; Chapter 21: Federal Cumulative Effects Assessment, section 21.4). However, as the Project is not predicted to adversely affect BRFN's routes of access and transportation, there is no anticipated difference between BRFN's ability to exercise its rights, with respect to access and transportation, between future conditions with the Project and future conditions without the Project.

20.8.4.2 Hunting

Consultation efforts to date have not yielded information about BRFN's hunting activities in the vicinity of the Project. Available information indicates that BRFN members currently hunt for moose in the Tumbler Ridge area.

As described in the Assessment of Wildlife Effects (Chapter 13), the Project is not expected to result in significant adverse effects to wildlife. As described in the Assessment of Current Use of Lands and Resources for Traditional Purposes Effects (Chapter 17), the Project is not expected to result in significant adverse effects to hunting in relation to the quantity of resources, the quality of resources, access to resources, or the quality of experience of the natural environment.

Other current and reasonably foreseeable projects in the region were assessed for their potential to interact with the Project to create cumulative effects on wildlife (Chapter 13: Assessment of Wildlife Effects, section 13.11; Chapter 21: Federal Cumulative Effects Assessment, section 21.12).

The cumulative effects assessment identified residual cumulative effects for moose and grizzly bear. Residual cumulative effects for moose include reduction in available high-quality habitat and reduced movement of moose along the Murray River. The residual cumulative effect for grizzly bear is reduced movement of grizzly bear along the Murray River.

Past and present developments in the RSA have resulted in the loss and alteration of 4.9% and 3.5% of moose habitat, respectively. The Project will remove and alter an additional 0.2% and 0.7% of late winter habitat. Additional future projects will remove and alter an additional 0.9% and 3.1% of moose late winter habitat. The majority of future effects are due to, in decreasing order: wind power projects, oil and gas, and mining. The total area of habitat removed due to all past, present and future activities is 1,178 ha of winter habitat, or 5.9% of the high quality habitat in the RSA. Assuming a moose density of 0.003 moose/ha, this area is equivalent to the home ranges of 3.5 moose.

The cumulative effect on moose habitat is rated as not significant (minor) for the following reasons:

- the cumulative effect will result in a relatively small amount of habitat loss;
- several forms of habitat alteration are beneficial to the moose population;
- the effect is reversible as both forestry and most mining operations are suitable for reclamation post-closure;
- the resiliency of the moose population to disturbed and fragmented habitat is relatively high; and
- moose are common throughout BC.

The distribution of infrastructure along Murray River due to mining and forestry operations was evaluated as a residual cumulative effect on the disruption of movement of moose north and south through the Murray River corridor. The Wolverine River corridor will be relatively unaffected by the Project, with the exception of rail traffic twice a day. The combination of all past, present and future activities on the MRRMZ will result in the removal of 9.8% (155 ha) of winter habitat and the further alteration of an additional 14.2% (224 ha) of habitat.

The cumulative effect of disruption of moose movement is assessed as not significant (minor) for the following reasons:

- the residual effect of disruption of moose movements is expected to have a minor magnitude;
- the effect will be reversible long term because of reclamation activities of development areas along the Murray River;
- the resiliency of the moose population to disturbed and fragmented habitat is relatively high; and
- moose are common throughout BC.

Currently, 11.2% of grizzly bear spring habitat has been lost in the Murray River Resource Management Zone (MRRMZ), largely due to transportation corridors and 34.3% has been altered, largely by forestry. The addition of the Murray River project would remove an additional 2.3% and alter an additional 1.2% of spring habitat for grizzly bears in the MRRMZ. Additional future projects, largely oil and gas, may cause the loss and alteration of an additional 3.4% and 6.7% of spring habitat for a total of 17% lost and 42% altered. Note that the altered habitat is largely forestry cutblocks and pipeline rights of way, which grizzly bears may use to forage or movements (Nielsen et al. 2004).

The cumulative effect of disruption to grizzly bear movement is assessed as not significant (moderate) for the following reasons:

- Due to the relatively high proportion of habitat lost and altered in the MRRMZ, the magnitude of the effect is rated as medium. However, this effect is mitigated, to some degree, by the movement habits of grizzly bears. Bears have very large home ranges and move across the landscape continuously and have a variety of habitats that they use for movement, including riparian, mid elevation and alpine;
- It is not expected that this effect will have local or regional population-scale effects; and
- The effect will be reversible in the long-term once the projects end. Bears may temporarily avoid habitats where there is a barrier to their movement, but are expected to re-occupy the habitat once the disturbance is removed.

BRFN members are not known to currently hunt in the Project footprint, but do hunt moose in the Tumbler Ridge area (Section 17.4.7.2). Project-related adverse effects on moose due to habitat loss and disruption of movement, while not significant, may reduce BRFN's moose hunting opportunities in the LSA. While residual cumulative effects on moose are predicted to be not significant (minor), the exercise of BRFN's Treaty 8 rights with respect to the quantity of wildlife may differ between future conditions with the Project and future conditions without the Project.

In addition, should BRFN members choose to hunt within close proximity to the Project, the exercise of BRFN's Treaty 8 hunting rights may be affected due to Project-related sensory disturbance (Section 17.7).

Other foreseeable future mining, hydroelectric, and other commercial activities, such as oil and gas exploration have the potential to act cumulatively with the Project by adding to the visual and auditory changes in the LSA. This is a spatial/temporal crowding effect in that it reduces the number of hunting and trapping locations in the LSA considered to be free of auditory or visual disturbances (Section 17.10.2.6).

Consequently, the exercise of BRFN's Treaty 8 hunting rights with respect to the experience of the environment while hunting may differ between future conditions with the Project and future conditions without the Project.

The Proponent will implement the following mitigation measures to minimize the above effects:

- work with Aboriginal groups to facilitate their participation in ongoing monitoring, during pre-mine, during construction and operations, and post-mine periods.
- work to maintain Aboriginal groups' continuity of use via ongoing monitoring to prevent the creation of 'avoidance areas' for Aboriginal peoples.
- engage in ongoing communication with Aboriginal groups, including translation of technical reports for Aboriginal membership

20.8.4.3 Fishing

Consultation efforts to date have not yielded information about BRFN's fishing activities, if any, in the vicinity of the Project. As described in Section 20.9.2, available information does not indicate that BRFN members currently use areas in the vicinity of the Project for fishing, as determined with respect to the LSA and RSA for the Assessment of Fish and Fish Habitat Effects (Chapter 9, Figure 9.6-1), with the possible exception of walleye fishing in Gwillim Lake.

As described in the Assessment of Fish and Fish Habitat Effects (Chapter 9), the Project is not predicted to result in significant adverse effects to fish or fish habitat. As described in the Assessment of Current Use of Lands and Resources for Traditional Purposes Effects (Chapter 17), the Project is not expected to result in significant adverse effects to fishing in relation to the quantity of resources, the quality of resources, access to resources, or the quality of experience of the natural environment.

No residual effects to fish and fish habitat as a result of the Project are predicted (Chapter 9). Consequently, the Project is not expected to contribute to cumulative effects to fish and fish habitat (Chapter 9). Given that no residual cumulative effects are predicted, the exercise of BRFN's Treaty 8 rights with respect to fish are not expected to differ between future conditions with the Project and future conditions without the Project.

20.8.4.4 Gathering

Consultation efforts to date have not yielded information about BRFN's berry and plant gathering activities, if any, in the vicinity of the Project. As described in Section 20.9.2, available information does not indicate that BRFN members currently use areas in the vicinity of the Project for berry and plant gathering, as determined with respect to the LSA and RSA for the Assessment of Terrestrial Ecosystem Effects (Chapter 11, Figure 11.5-1).

As described in the Assessment of Terrestrial Ecosystem Effects (Chapter 11), the Project is not predicted to result in significant adverse effects to harvestable plants. As described in the Assessment of Current Use of Lands and Resources for Traditional Purposes (Chapter 17), the Project is not predicted to result in significant adverse effects to gathering opportunities and practices, in relation to the quantity of resources, the quality of resources, access to resources, or the quality of experience of the natural environment.

Other current and reasonably foreseeable projects in the region were assessed for their potential to interact with the Project to create cumulative effects on terrestrial ecosystems (Chapter 11). The assessment predicts a cumulative residual effect of loss or alteration of harvestable plant quantity or quality for harvestable plants. The cumulative loss and alteration to harvestable plant habitat is difficult to accurately characterize because the location, type and quantity of harvestable plants within the region is unknown. Many of the ecosystems within the region can provide suitable habitat for harvestable plants and as such harvestable plant habitat was assessed in relation to effects on forested ecosystems. However, the effects to harvestable plant habitat are expected to be considerably less in extent than the loss and alteration reported for forested ecosystem. Furthermore, in certain cases, human derived alteration will increase the amount of harvestable plant habitat.

Loss and alteration of harvestable plants are considered not significant (Chapter 11). The magnitude of the direct effects to harvestable plants is considered moderate because although 33.7% of the available habitat could be lost or altered by cumulative effects, some of the human derived alteration will increase the amount of harvestable plants. Development activities such as timber harvesting can favour berry production by increasing the light available to plants and by reducing competing vegetation. Other cumulative effects to harvestable plants include nibbling loss of relevant habitat, physical transport of invasive plant propagules, spatial and temporal crowding in areas where multiple project effects intersect with harvestable plant habitat as well as additive effects from the accumulation of metals in some soils and subsequent plant uptake as well as growth inducing effects due to the creation of new edges. All of the effects are considered regional in extent and reversible in the long term. The duration of effects are expected to occur over the medium to long term depending on the relevant plant and its associated habitat requirements. In an ecological context, harvestable plants are considered neutral as they have some unique attributes, particularly to the local communities (discussed further in Chapter 16, Land Use). There is a medium level of confidence in the analyses because the effects to harvestable plants are generally well understood; however, uncertainty exists regarding the magnitude of alteration.

Given that available information does not identify the Project footprint as a preferred gathering location for BRFN members, the exercise of BRFN's Treaty 8 rights with respect to berries, medicines, and other plants is not expected to differ between future conditions with the Project and future conditions without the Project.

20.8.4.5 Habitations and Community Gatherings (Culture Camps)

Consultation efforts to date have not yielded information about BRFN's habitations and community gatherings, if any, in the vicinity of the Project. As described in Section 20.9.2, available information does not indicate that BRFN members currently use areas in the vicinity of the Project for habitations and community gatherings, as determined with respect to the LSA and RSA for the Assessment of Heritage Effects (Chapter 19, Figure 19.5-1).

As described in the Assessment of Current Use of Lands and Resources for Traditional Purposes (Chapter 17), the Project is not predicted to result in significant adverse effects to habitations, in relation to access to habitations, or the quality of experience of the natural environment.

Given that the Project is not expected to affect BRFN's habitations and community gatherings, BRFN's exercise of its Treaty 8 rights with respect to habitations and community gatherings is not expected to differ between future conditions with the Project and future conditions without the Project.

20.8.5 Summary of Residual Effects on Blueberry River First Nation's Treaty Rights and Related Interests

Project-related adverse effects on moose due to habitat loss and disruption of movement, while not significant, may reduce BRFN's moose hunting opportunities in the LSA. While residual cumulative effects on moose are predicted to be not significant (minor), the exercise of BRFN's Treaty 8 rights with respect to the quantity of wildlife may differ between future conditions with the Project and future conditions without the Project. In addition, should BRFN members choose to hunt within close proximity to the Project, the exercise of BRFN's Treaty 8 hunting rights may be affected due to Project-related sensory disturbance. The exercise of BRFN's Treaty 8 hunting rights with respect to the experience of the environment while hunting may differ between future conditions with the Project and future conditions without the Project.

20.9 EFFECTS ASSESSMENT FOR HORSE LAKE FIRST NATION

20.9.1 Consultation with Horse Lake First Nation

20.9.1.1 Engagement Activities Undertaken by the Proponent

The Proponent met with the President of the HLFN Industry Relations Committee on October 16, 2013 to provide an overview Project and to understand and discuss HLFN's Aboriginal and treaty rights and related interests, as well as HLFN's engagement preferences. The Proponent provided HLFN with an information package, including Project description, EIA Guidelines, AIR, and a list of studies to be completed. The consultation record is described and documented in Chapter 2: Information Distribution and Consultation.

The Proponent wrote to HLFN on April 25, 2014 to provide members with a plain language summary of the proposed Project and to summarize the types of information that will be included in the Application/EIS. The latter document outlined the Proponent's understanding of HLFN's Aboriginal and treaty rights and related interests as related to the Project, issues and concerns raised by HLFN's with respect to the Project, valued components of potential interest to HLFN, and the Proponent's proposed approach to assess potential impacts of the Project on HLFN's Aboriginal and Treaty rights and related interests. On June 23, 2014, HLFN requested further information from the Proponent, to be prepared in a specified format. The Proponent has requested HLFN to provide the forms necessary to prepare the information.

The Proponent will continue engage with HLFN throughout the Application/EIS review period as outlined in the First Nations Consultation Plan and Chapter 2. The Proponent will continue to seek information from HLFN about Aboriginal and treaty rights and related interests that may be impacted by the Project and means to avoid, mitigate, or otherwise accommodate any potential impacts.

20.9.1.2 Overview of the Horse Lake First Nation's Comments and Concerns

HLFN has raised the following key concerns about the Project:

- Potential effects on hunting, fishing, trapping, and gathering; and
- Potential effects on spiritual and ceremonial sites.

A detailed list of HLFN's comments and concerns, and the Proponent's responses, are located in Appendix E of Chapter 2. Issues and concerns that specifically relate to HLFN's Aboriginal and treaty rights and related interests are identified in Section 20.9.3.3 and within each assessment topic in Section 20.9.4.

20.9.1.3 Responses Provided by the Proponent

The Proponent provided HLFN with information about the Project, including how the Project design will minimize wildlife habitat effects by creating a small footprint, utilizing already disturbed land, and using existing access roads. The Proponent informed HLFN of its decision to make a substantial change from an approximately four kilometre overland conveyor that would cross Murray River to a second underground decline under Murray River, and how this change will reduce potential effects to wildlife mobility associated with linear developments, fish habitat, and archaeological sites.

Section 20.9.4 provides a detailed assessment of the potential Project effects on HLFN's Aboriginal and treaty rights and related interests.

20.9.1.4 Future Planned Engagement Activities

The Proponent will continue engage with HLFN throughout the Application/EIS review period as outlined in Chapter 2 of the Application/EIS. Planned engagement activities with HLFN include responding to HLFN's formal comments on the Application/EIS and arranging meetings with HLFN to discuss potential adverse effects of the Project on HLFN's Aboriginal and treaty rights and related interests, if any, and proposed mitigation measures.

20.9.2 Baseline Conditions

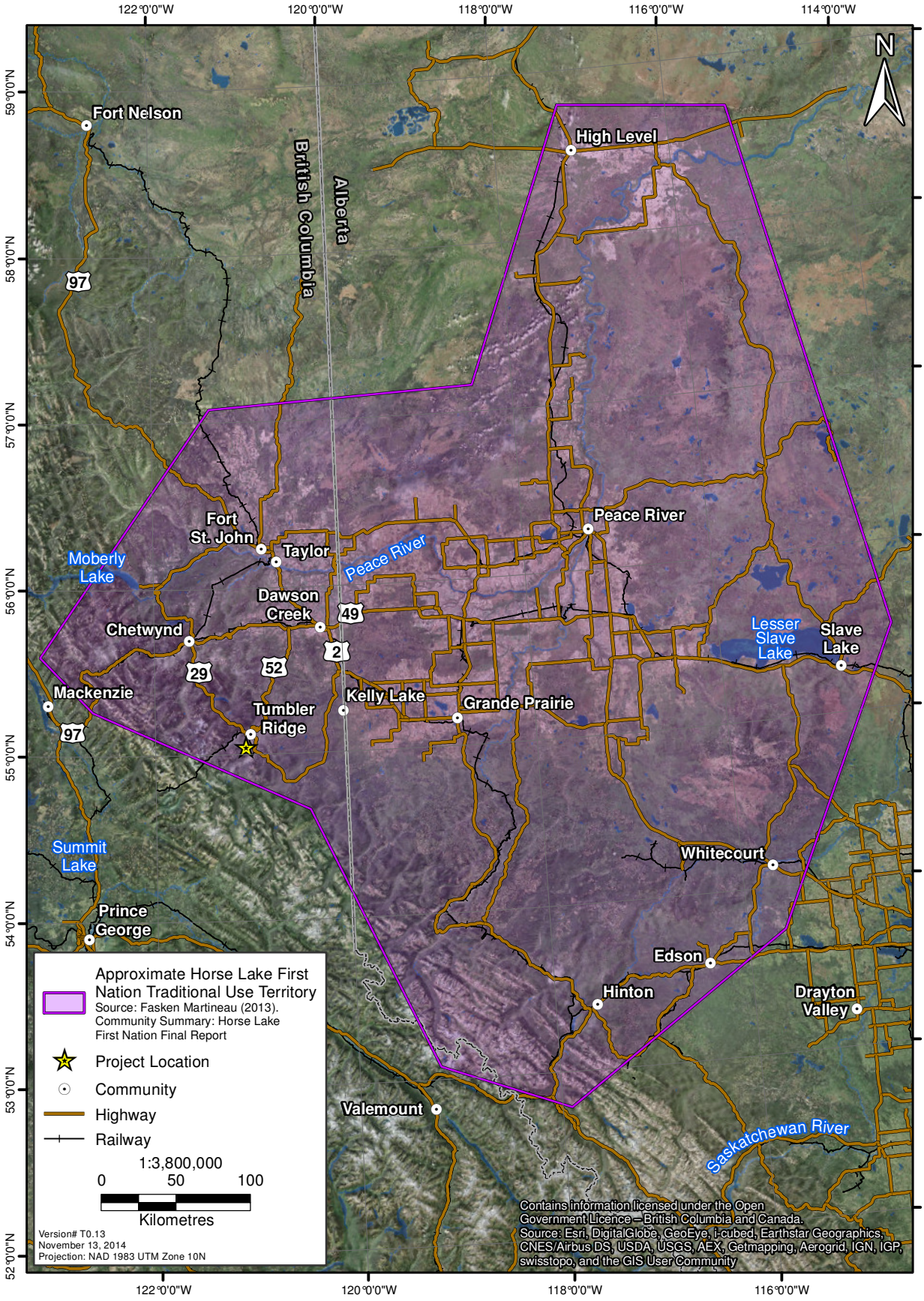
20.9.2.1 Traditional Territory and Reserves

HLFN has two reserves (Horse Lakes 152B and Clear Hills 152C), with a total area of 3,099.1 ha (AANDC 2013). The main community of Horse Lakes 152B is located 60 km north-northwest of Grande Prairie, Alberta (89 km east-northeast of the Project) (Figure 20.3-1).

HLFN (the Beaver Band at Dunvegan) adhered to Treaty 8 on July 6, 1899. HLFN defines a traditional territory within the larger Treaty 8 lands, located between Dawson Creek, BC and Grande Prairie, Alberta, on both sides of the border (Traditions Consulting Services 2013a) (Figure 20.9-1). Within this territory, the Nation defines an "Area of Critical Interest" and an "Area of Economic Interest." Neither of these areas overlaps with the Project area.

Figure 20.9-1

Horse Lake First Nation Traditional Territory



20.9.2.2 Ethnography and Language

HLFN is of Dane-zaa, Cree, and Iroquois descent (A. Ridington 2013). The primary Aboriginal language spoken in the HLFN community is Cree (Statistics Canada 2013b).

20.9.2.3 Population and Governance

As of June 2014, HLFN had a registered population of 1,089 members, with 462 members living on their own reserve, 11 members living on other reserves, and 614 members living off-reserve (AANDC 2014a). The on-reserve population increased by approximately 20% between 2006 and 2011 (Statistics Canada 2013b).

HLFN is governed by a Chief and four Councillors elected under a custom electoral system (AANDC 2014a). The HLFN Industry Relations Corporation is mandated to take a lead role in project consultations, liason with industry, environmental reviews, and negotiations with industry, as well as to protect and assert treaty rights and interests with government and industry (Horse Lake Industry Relations Corporation nd). HLFN is member of the Western Cree Tribal Council and the Treaty 8 First Nations of Alberta.

20.9.2.4 Economy

HLFN continues to engage in a non-market subsistence economy. In addition, the Nation engages in market-based economic activities.

Most on-reserve members are employed in public administration, with smaller numbers employed in mining, quarrying, and oil and gas extraction; construction; administrative support, waste management and remediation services; and health care and social assistance. Primary occupations among those employed include: trades, transport and equipment operators and related occupations; occupations in education, law and social, community and government services; management occupations; natural resources, agriculture and related production occupations; sales and series occupation; health occupations; and business, finance and administration occupations. The on-reserve unemployment rate is 8.3% (Statistics Canada 2013b).

20.9.2.5 Land Use Setting and Planning

HLFN traditionally hunted and trapped in the BC portion of its traditional territory (Bouchard and Kennedy Research Consultants 2012). Members continue to hunt, fish, trap, and gather in their BC sections of their traditional territory (Savard and Geernaert 2013; Traditions Consulting Services 2013a).

The Proponent's socio-economic consultant did not locate any information relating to HLFN land use planning in BC.

20.9.2.6 Summary of Treaty Rights and Related Interests Held by Horse Lake First Nation

HLFN (the Beaver Band at Dunvegan) adhered to Treaty 8 on July 6, 1899, establishing treaty rights to hunt, trap, and fish in their traditional territory within Treaty 8. HLFN describes Treaty 8 as

guaranteeing "the right to fish, hunt, gather and practice their traditional vocations through the entirety of the Treaty # 8 area" (Savard and Geernaert 2013). HLFN elaborates this view as follows:

> *From HLFN's viewpoint, this means that their community members have the ability to exercise their rights anywhere within the Treaty #8 area, even if they have not elected to exercise such rights in a given location on a prior occasion. Thus within the treaty context, treaty rights are deemed to be portable and attached to the treaty beneficiary. The ability to travel and exercise such rights as and when needed and make a livelihood from the land is critical given key factors that can also determine when and how rights or traditional vocations can be practically exercised. The availability and abundance of fish and wildlife, the movements and migration of fish and wildlife populations, seasonal and longer term climatic trends and the growing influence and impact of development are all factors that make the totality of Treaty #8 lands important to, and of interest to the HLFN. HLFN members report that they have and do utilize ands and resources within areas in BC, covered by Treaty #8.*

20.9.2.7 Past, Present and Anticipated Future Uses of the Project Area by Horse Lake First Nation

Consultation efforts to date have not yielded information about HLFN's past, present or anticipated future use of the Project area. The Assessment of Heritage Effects (Chapter 19) documents 72 known prehistoric archaeological sites within the assessment's RSA (Figure 19.5-1). Most of these sites are related to use of the landscape for activities such as hunting and resource gathering. Lithic scatters (scatters of stone tools and stone waste chips) are the most common archaeological site types found in the RSA. It is not known whether any of these sites were produced by the ancestors of HLFN.

Prior to contact, the Dane-zaa hunted and trapped a wide variety of species, including woodland caribou, moose, elk, mule deer, grizzly bear, black bear, goat, mountain sheep, hoary marmot, bison, porcupine, beaver, and fur bearing animals (Jenness 1937; R. Ridington 1968; Brody 1981). Bison were hunted on the prairies and woodlands beside the Peace River, caribou in the lower mountain ranges and parklands, and sheep and goats in the high mountains (R. Ridington 1968; Bouchard and Kennedy Research Consultants 2011). Wood bison were the most important food source prior to the mid-1980s; subsequently, moose gained primary importance and woodland caribou were important where available (Bouchard and Kennedy Research Consultants 2011). Rabbit, beaver, grouse, porcupine, and squirrel were relied upon particularly through lean times (Bouchard and Kennedy Research Consultants 2011). Dane-zaa relied on fishing to supplement game procured through hunting (R. Ridington 1968), catching species native to the region, including lake trout, bull trout, walleye, northern pike, burbot, Arctic grayling, and mountain whitefish (Treaty 8 First Nations Community Assessment Team and The Firelight Group Research Cooperative 2012; Site C First Nations Engagement Team 2013). Berries were not a key food source, but were collected and dried for winter use. Berries harvested included Saskatoon, huckleberries, blueberries, raspberries, gooseberries, crowberries and cranberries (Bouchard and Kennedy Research Consultants 2011). The cambium of poplar trees was consumed as were a few roots (Goddard 1916). Dane-zaa peoples followed a seasonal round characterized by five distinct periods: the fall dry-meat hunt, early winter hunting and trapping, late winter hunting and trapping, spring beaver hunting, and the summer slack (Brody 1981).

HLFN members continue to hunt, trap, fish, and gather in their traditional territory (Figure 20.9-2). In addition, HLFN members undertake activities that are incidental to their treaty rights, such as building and maintaining camps and cabins (Savard and Geernaert 2013).

Species harvested by HLFN members include moose, white tailed deer, mule deer, elk, bear (grizzly and black bear), and other ungulate (includes caribou, mountain goat, sheep). Birds hunted by HLFN members include waterfowl and upland birds. HLFN members fish for trout (bull trout and other species of trout), northern pike, walleye, whitefish, and grayling. Members collect a variety of berries, including, saskatoon berry, wild raspberry, blueberry, wild strawberry, choke cherry, and low bush / hi bush cranberry (Savard and Geernaert 2013).

In north-eastern BC, members harvest resources as far west as Williston Lake and as far south as areas within the upper Jasper Park watersheds. Use areas extend from Hudson's Hope, BC to south of Grand Prairie, AB. A sub-cluster of land use is evident south of Taylor, BC (Savard and Geernaert 2013). Pink Mountain is also identified as a hunting area.

Closer to the Project, the Tumbler Ridge area is identified by HLFNs as a place where they hunted and trapped in the recent past (The JLS Report 2013). In one report, this includes guiding around Quintette Mountain, towards Lake Rupert[4] and continuing past Kinuseo Creek (in the LSA- Bouchard and Kennedy Research Consultants 2012). Kinuseo Falls and Murray River, to the south of the Project, are used by the HLFN for fishing, as well as Kelly Lake and Swan Lake. Wapiti River and Red Deer Creek are also identified as fishing spots. The Tumbler Ridge area is identified as a place where HLFN members collect medicinal plants such as "rat root" (The JLS Report 2013). Huckleberries are picked along the Wapiti River. Belcourt Creek is also identified as a berry picking area.

HLFN indicate that members will continue to exercise their Aboriginal and treaty rights and related interests in the future. However, members indicate that their ability to exercise their rights and interests has decreased over time. HLFN members report that, due to industrial development and ecological fragmentation within their traditional territory, they are required to spend more time and cover greater distance to hunt and fish (Savard and Geernaert 2013). If these trends continue, HLFN's exercise of their Aboriginal and treaty rights and related interests may be diminished in the future in comparison with the present.

20.9.3 Scope of the Assessment

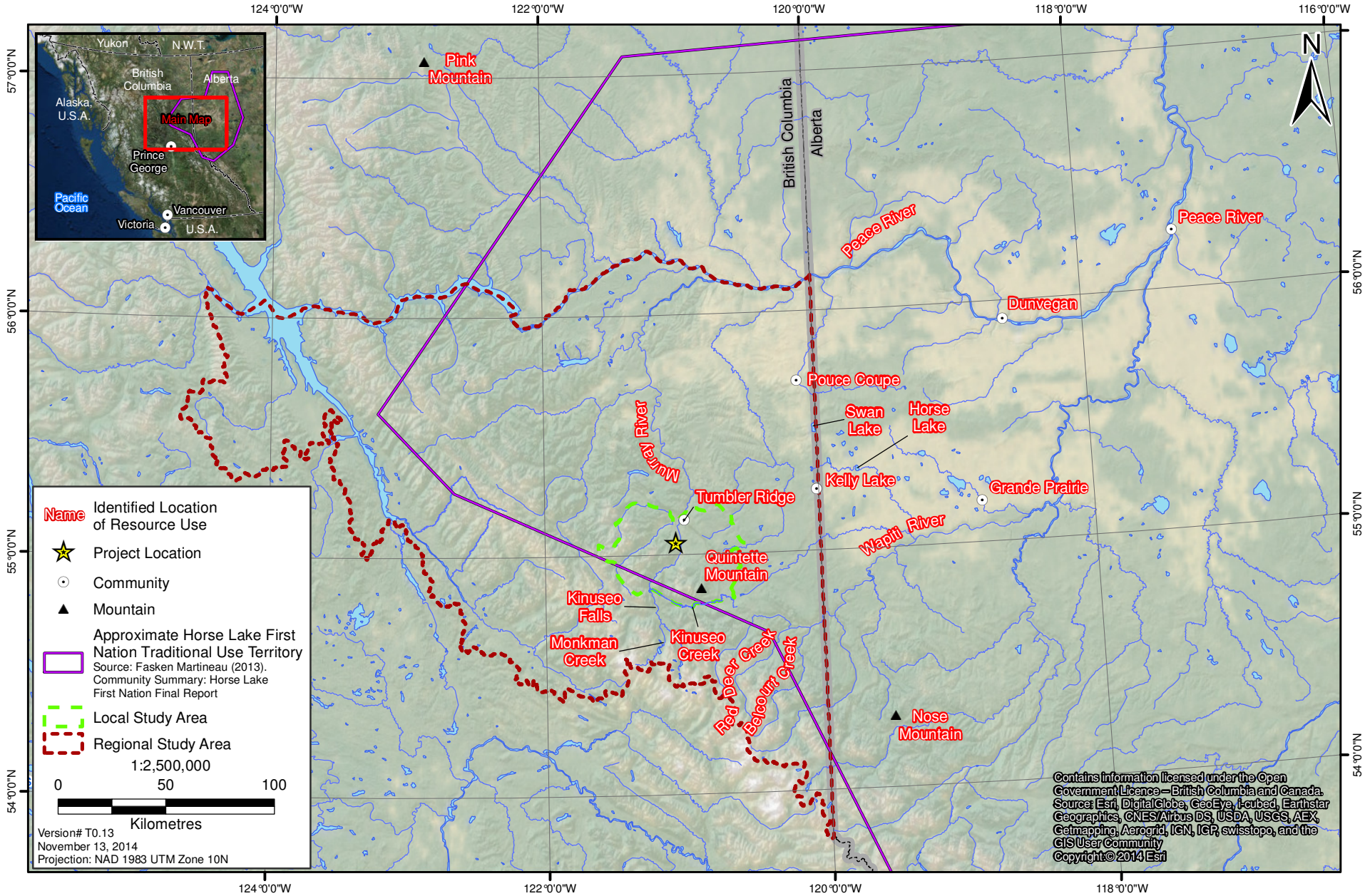
20.9.3.1 Valued Components Suggested by Horse Lake First Nation for Inclusion in the Application/Environmental Impact Statement

HLFN did not suggest VCs for inclusion in the Application/EIS.

[4] This may be a local usage as there is currently no gazetted "Lake Rupert" or "Rupert Lake" in the BC place names database.

Figure 20.9-2

Horse Lake First Nation - Locations of Traditional and Current Land Use



20.9.3.2 Incorporation of Horse Lake First Nation's Traditional Knowledge and other Views Into the Assessment

The Proponent has not obtained information about HLFN's traditional knowledge as it relates to the Project.

20.9.3.3 Identification of Measurable Parameters

HLFN informed the Proponent in an email dated October 23, 2013 of its view that the Project could adversely impact its Aboriginal and treaty rights. As stated in the letter:

> *the Project can reasonably be expected to have an adverse impact on our ability to exercise our Treaty and Aboriginal rights both directly, by causing lands to be taken up within the immediate vicinity of the Project, and indirectly and cumulatively, by adversely affecting habitat and animal populations in the area as well as other resources on which we rely to exercise our Treaty and Aboriginal rights.*

Key concerns outlined in HLFNs' October 2013 email to the Proponent include:

- diminishment of the quality and quantity of wildlife and fish;
- fragmentation of wildlife habitat;
- disruption of wildlife migration patterns;
- vegetation loss;
- increased hunting and poaching due to easier motor vehicle access;
- direct destruction of hunting, fishing, trapping and gathering areas; and
- adverse impacts to water and ecosystems.

The concerns outlined above are adopted as measurable parameters for the purpose of assessing potential Project effects on HLFN's Aboriginal and Treaty rights and related interests.

20.9.4 Assessment of Effects on Horse Lake First Nation's Treaty Rights and Related Interests

20.9.4.1 Quality and Quantity of Wildlife

Consultation efforts to date have not yielded information about specific wildlife species of interest to HLFN members in the vicinity of the Project. Publically available information indicates that HLFN hunts and traps in the Tumbler Ridge area (Section 17.4.8.2).

The Project is not predicted to result in significant adverse effects to caribou, as caribou are a high elevation species and the Project is located at a low elevation in a valley. Effects on elk are predicted to be negligible, as the Project will result in a relatively small direct and functional (i.e. sensory disturbance-related) loss of habitat and/or disruption to movement (Chapter 13: Assessment of Wildlife Effects). The Project is not predicted to result in significant adverse effects to wildlife health

resulting from contamination soil or water contamination (Chapter 18: Assessment of Health Effects). The Project design no longer includes an overland conveyor belt. The Project is not predicted to result in significant adverse effects to human health in relation to the consumption of country foods (Chapter 18: Assessment of Health Effects).

The Project is predicted to adversely affect the migration patterns of grizzly bears and furbearers, due disruption of movement (Chapter 13: Assessment of Wildlife Effects). Mitigation measures proposed by the Proponent include: giving wildlife the right-of-way along access roads and the highway and enforcing speed limits along on-site Project roads. HLFN have not suggested mitigation measures relating to migration pattern effects. Effects of disruption to movement on grizzly bears are predicted to be not significant as grizzly bears have very large home ranges and move across the landscape continuously and have a variety of habitats that they use for movement. The effect will be reversible once operations cease. Effects of disruption of movement on furbearers are predicted to be not significant as some riparian habitat is anticipated to be undisturbed within the Mine Site Assessment Footprint that would continue to allow furbearer movement past the Project area. The effect is reversible over the long term through reclamation activities.

Other current and reasonably foreseeable projects in the region were assessed for their potential to interact with the Project to create cumulative effects on wildlife (Chapter 13: Assessment of Wildlife Effects, section 13.11; Chapter 21: Federal Cumulative Effects Assessment, section 21.12). The cumulative effects assessment identified residual cumulative effects for moose and grizzly bear. Residual cumulative effects for moose include reduction in available high-quality habitat and reduced movement of moose along the Murray River. The residual cumulative effect for grizzly bear is reduced movement of grizzly bear along the Murray River.

Past and present developments in the RSA have resulted in the loss and alteration of 4.9% and 3.5% of moose habitat, respectively. The Project will remove and alter an additional 0.2% and 0.7% of late winter habitat. Additional future projects will remove and alter an additional 0.9% and 3.1% of moose late winter habitat. The majority of future effects are due to, in decreasing order: wind power projects, oil and gas, and mining. The total area of habitat removed due to all past, present and future activities is 1,178 ha of winter habitat, or 5.9% of the high quality habitat in the RSA. Assuming a moose density of 0.003 moose/ha, this area is equivalent to the home ranges of 3.5 moose.

The cumulative effect on moose habitat is rated as not significant (minor) for the following reasons:

- the cumulative effect will result in a relatively small amount of habitat loss;
- several forms of habitat alteration are beneficial to the moose population;
- the effect is reversible as both forestry and most mining operations are suitable for reclamation post-closure;
- the resiliency of the moose population to disturbed and fragmented habitat is relatively high; and
- moose are common throughout BC.

The distribution of infrastructure along Murray River due to mining and forestry operations was evaluated as a residual cumulative effect on the disruption of movement of moose north and south through the Murray River corridor. The Wolverine River corridor will be relatively unaffected by the Project, with the exception of rail traffic twice a day. The combination of all past, present and future activities on the Murray River Resource Management Zone (MRRMZ) will result in the removal of 9.8% (155 ha) of winter habitat and the further alteration of an additional 14.2% (224 ha) of habitat.

The cumulative effect of disruption of moose movement is assessed as not significant (minor) for the following reasons:

- the residual effect of disruption of moose movements is expected to have a minor magnitude;
- the effect will be reversible long term because of reclamation activities of development areas along the Murray River;
- the resiliency of the moose population to disturbed and fragmented habitat is relatively high;
- moose are common throughout BC.

Currently, 11.2% of grizzly bear spring habitat has been lost in the MRRMZ, largely due to transportation corridors and 34.3% has been altered, largely by forestry. The addition of the Murray River project would remove an additional 2.3% and alter an additional 1.2% of spring habitat for grizzly bears in the MRRMZ. Additional future projects, largely oil and gas, may cause the loss and alteration of an additional 3.4% and 6.7% of spring habitat for a total of 17% lost and 42% altered. Note that the altered habitat is largely forestry cutblocks and pipeline rights of way, which grizzly bears may use to forage or movements (Nielsen et al. 2004).

The cumulative effect of disruption to grizzly bear movement is assessed as not significant (moderate) for the following reasons:

- Due to the relatively high proportion of habitat lost and altered in the MRRMZ, the magnitude of the effect is rated as medium. However, this effect is mitigated, to some degree, by the movement habits of grizzly bears. Bears have very large home ranges and move across the landscape continuously and have a variety of habitats that they use for movement, including riparian, mid elevation and alpine;
- It is not expected that this effect will have local or regional population-scale effects; and
- The effect will be reversible in the long-term once the projects end. Bears may temporarily avoid habitats where there is a barrier to their movement, but are expected to re-occupy the habitat once the disturbance is removed.

HLFN members are not known to currently hunt in the Project footprint, but do hunt and trap in the Tumbler Ridge area (Section 17.4.8.2). Project-related adverse effects on moose, grizzly bear, and furbearers due to habitat loss and disruption of movement, while not significant, may reduce HLFN's moose hunting and trapping opportunities in the LSA. While residual cumulative effects on moose, grizzly bear, and furbearers are predicted to be not significant (minor), the exercise of

BRFN's Treaty 8 rights with respect to the quantity of wildlife may differ between future conditions with the Project and future conditions without the Project.

In addition, should HLFN members choose to hunt and trap within close proximity to the Project, the exercise of HLFN's Treaty 8 hunting rights may be affected due to Project-related sensory disturbance (Section 17.7).

Other foreseeable future mining, hydroelectric, and other commercial activities, such as oil and gas exploration have the potential to act cumulatively with the Project by adding to the visual and auditory changes in the LSA. This is a spatial/temporal crowding effect in that it reduces the number of hunting and trapping locations in the LSA considered to be free of auditory or visual disturbances (Section 17.10.2.6).

Consequently, the exercise of HLFN's Treaty 8 hunting rights with respect to the experience of the environment while hunting may differ between future conditions with the Project and future conditions without the Project.

The Proponent will implement the following mitigation measures to minimize the above effects:

- work with Aboriginal groups to facilitate their participation in ongoing monitoring, during pre-mine, during construction and operations, and post-mine periods;
- work to maintain Aboriginal groups' continuity of use via ongoing monitoring to prevent the creation of 'avoidance areas' for Aboriginal peoples; and
- engage in ongoing communication with Aboriginal groups, including translation of technical reports for Aboriginal membership.

20.9.4.2 Quality and Quantity of Fish

Consultation efforts to date have not yielded information about fish species of interest to HLFN members in the vicinity of the Project.

The Assessment of Fish and Fish Habitat Effects (Ch. 9) examined potential effects on fish with regard to:

- changes to water quality, resulting from the introduction of chemical products, nitrogeneous compounds, petroleum products, and selenium into water bodies.
- spawning, feeding, and habitat use changes, resulting from sedimentation and erosion
- direct mortality, resulting from contact with equipment and increased fishing pressure
- habitat loss, resulting from stream crossings, infrastructure, and sedimentation.

Measures proposed by the Proponent to mitigate any potential Project effects on fish (in addition to water quality control) include:

- adhering to appropriate fisheries operating windows for fish-bearing streams;

- minimizing the potential for spills into fish-bearing streams;
- protecting fish habitat near project infrastructure; and
- adhering to all regulations and best-practices.

With the adoption of the above mitigation measures, the Project is not predicted to result in residual effects to fish or fish habitat.

Surface water quality within the area of the Shaft Site, Decline Site, Coal Processing Site and Murray FSR is predicted to remain similar to background conditions (Section 18.8.3.3 and Chapter 8, Assessment of Surface Water Quality Effects) during all Project phases, and hence the quality of fish from these water bodies is expected to be similar to that measured in baseline studies (Chapter 18, Assessment of Human Health Effects).

No residual effects to fish and fish habitat as a result of the Project are predicted (Chapter 9). Consequently, the Project is not expected to contribute to cumulative effects to fish and fish habitat (Chapter 9).

The Project is not expected to affect HLFN's treaty rights to fish in relation to the quantity of fish available. However, the Project may affect HLFN's fishing rights due to: reduced quality of fishing experience associated with Project-related noise and visual changes; and reduced perceived quality of fishing resources (Section 17.7).

Given that no residual cumulative effects on fish and fish habitat are predicted, the exercise of HLFN's Treaty 8 rights with respect to the quantity of fish are not expected to differ between future conditions with the Project and future conditions without the Project. However, other foreseeable future mining, hydroelectric, and other commercial activities, such as oil and gas exploration have the potential to act cumulatively with the Project by adding to the visual and auditory changes in the LSA. This is a spatial/temporal crowding effect in that it reduces the number of fishing locations in the LSA considered to be free of auditory or visual disturbances (Section 17.10.2.5). Additionally, other foreseeable future mining, hydroelectric, and other commercial activities, such as oil and gas exploration have the potential to act cumulatively with the Project by reducing the number of streams or watercourses thought to be free of contamination by Aboriginal groups. This is a nibbling loss effect in that it adds incrementally to perceived contamination of fish resources in preferred locations (Section 17.10.2.5). Consequently the exercise of HLFN's Treaty 8 rights may differ between future conditions with the Project and future conditions without the Project with respect to quality of experience while fishing and perceived quality of fish resources.

20.9.4.3 Wildlife Habitat

As described in Section 20.10.4.1 and Chapter 13, the Project is not predicted to result in significant adverse effects to wildlife due to habitat loss and alteration.

20.9.4.4 Wildlife Migration Patterns

As described in Section 20.10.4.1 and Chapter 13, the Project is not predicted to result in significant adverse effects to wildlife due to disruption to movement.

20.9.4.5 Vegetation Loss

Consultation efforts to date have not yielded information about egetation species of interest in the vicinity of the Project.

The Project is predicted to result in residual adverse effects to harvestable plants within the Project footprint due to the removal of ecosystems that support harvestable plants, the alteration of cleared sites' ability to provide habitat for harvestable plants, and subsidence effects (Chapter 11: Assessment of Terrestrial Ecosystem Effects). Mitigation measures will include:

- limiting the extent of vegetation clearing during Construction activities to the required minimum. During Construction soil will be stripped and stockpiled for future reclamation. This process will continue on a smaller scale during Operation to match the expanding footprint of the Coarse Coal Reject storage facilities;
- minimizing soil degradation (i.e., erosion) by salvaging soil during appropriate weather conditions, transporting to stockpiles in a timely manner, and establishing and implementing erosion control procedures early during the salvage process;
- carrying out dust suppression on roads to prevent fugitive dust from impacting plants and soils;
- promptly re-vegetating exposed soil surfaces during the appropriate growing season and conditions using seeds (and/or plants) suitable for the local area and ecosystems to avoid erosion and sedimentation, introduction of invasive plants, and to facilitate the re-establishment of ecological functions in the affected areas;
- providing appropriate education and training for employees and contractors outlining how to minimize effects on ecosystems, soils, and vegetation. This information will be prepared and made available to all employees on-site (e.g., through the Project Safety Office or other designated location) in the form of fact sheets and/or handbooks; and
- conducting follow up monitoring of cleared sites to monitor erosion and sediment control.

The potential loss and alteration of harvestable plants is not predicted to be significant, primarily due to the limited magnitude and extent of ecosystem removal caused by Project site clearing.

Other current and reasonably foreseeable projects in the region were assessed for their potential to interact with the Project to create cumulative effects on terrestrial ecosystems (Chapter 11). The assessment predicts a cumulative residual effect of loss or alteration of harvestable plant quantity or quality for harvestable plants. The cumulative loss and alteration to harvestable plant habitat is difficult to accurately characterize because the location, type and quantity of harvestable plants within the region is unknown. Many of the ecosystems within the region can provide suitable habitat for harvestable plants and as such harvestable plant habitat was assessed in relation to effects on forested ecosystems. However, the effects to harvestable plant habitat are expected to be

considerably less in extent than the loss and alteration reported for forested ecosystem. Furthermore, in certain cases, human derived alteration will increase the amount of harvestable plant habitat.

Loss and alteration of harvestable plants are considered not significant (Chapter 11). The magnitude of the direct effects to harvestable plants is considered moderate because although 33.7% of the available habitat could be lost or altered by cumulative effects, some of the human derived alteration will increase the amount of harvestable plants. Development activities such as timber harvesting can favour berry production by increasing the light available to plants and by reducing competing vegetation. Other cumulative effects to harvestable plants include nibbling loss of relevant habitat, physical transport of invasive plant propagules, spatial and temporal crowding in areas where multiple project effects intersect with harvestable plant habitat as well as additive effects from the accumulation of metals in some soils and subsequent plant uptake as well as growth inducing effects due to the creation of new edges. All of the effects are considered regional in extent and reversible in the long term. The duration of effects are expected to occur over the medium to long term depending on the relevant plant and its associated habitat requirements. In an ecological context, harvestable plants are considered neutral as they have some unique attributes, particularly to the local communities (discussed further in Chapter 16, Land Use). There is a medium level of confidence in the analyses because the effects to harvestable plants are generally well understood; however, uncertainty exists regarding the magnitude of alteration.

Given the Project footprint is not identified as a preferred gathering area for HLFN, the exercise of HLFN's Treaty 8 rights with respect to berries, medicines, and other plants is not expected to differ between future conditions with the Project and future conditions without the Project.

20.9.4.6 Non-Aboriginal Hunting and Poaching

The Assessment of Wildlife Effects (Chapter 13) determined that the Project does not have the potential to result in significant adverse effects to wildlife due to increased hunting and poaching, as the Project will not construct new roads which would provide hunters with access to new areas.

Consequently, the exercise of HLFN's Treaty 8 rights with respect to hunting is not expected to differ between future conditions with the Project and future conditions without the Project.

20.9.4.7 Direct destruction of Hunting Areas

Consultation efforts to date have not yielded information about hunting areas utilized by HLFN members in the vicinity of the Project. As described in Section 20.10.2, publically-available information indicates that HLFN members have hunted and trapped in the Tumbler Ridge area in the recent past (The JLS Report 2013). Available information does not indicate HLFN use in the proposed Project footprint.

The Assessment of Wildlife Effects (Chapter 13) assessed potential effects of Project activities on wildlife due to direct removal or alteration of wildlife habitat (i.e. the clearing of vegetation in the Project footprint). Mitigations proposed for habitat removal and alteration include:

- maintaining known and potential mineral licks in a natural state;

- ensuring that ungulates have access to mineral licks during the season when they are most used; and
- avoiding destruction or disruption of areas that contain known wallows, particularly during the ungulate breeding season.

The assessment did not predict that the Project would result in significant adverse effects to wildlife due to habitat alteration and loss.

Given that available information does not indicate that the Project footprint is a preferred hunting area for HLFN, the exercise of HLFN's Treaty 8 rights with respect to hunting is not expected to differ between future conditions with the Project and future conditions without the Project.

20.9.4.8 Direct Destruction of Trapping Areas

Consultation efforts to date have not yielded information about HLFN trapping areas in the vicinity of the Project. A review of publically-available information, summarized in Section 20.10.2, did not indicate the presence of HLFN trapping areas in the vicinity of the Project, as assessed in relation to the LSA for the Assessment of Wildlife Effects (Chapter 13, Figure 13.6-1).

The Assessment of Wildlife Effects (Chapter 13) did not predict that the Project activities would result in significant adverse effects to furbearing animals due to habitat alteration and removal.

Given available information does not indicate that the Project footprint is a preferred trapping area for HLFN, the exercise of HLFN's Treaty 8 rights with respect to trapping is not expected to differ between future conditions with the Project and future conditions without the Project.

20.9.4.9 Direct Destruction of Fishing Areas

Consultation efforts to date have not yielded information about HLFN's fishing areas within the vicinity of the Project. A review of publically-available information, summarized in Section 20.10.2, indicates HLFN fishing areas in the vicinity of the Project, as assessed in relation to the RSA for the Assessment of Fish and Fish Habitat Effects (Chapter 9, Figure 9.6-1). Available information does not indicate HLFN fishing areas in the immediate vicinity of the Project, as assessed in relation to the LSA for the Assessment of Fish and Fish Habitat Effects.

As described in Section 20.10.4.2 and Chapter 9, the Project is not predicted to result in significant adverse effects to fish or fish habitat due to habitat loss, sedimentation, or erosion.

No residual effects to fish and fish habitat as a result of the Project are predicted (Chapter 9). Consequently, the Project is not expected to contribute to cumulative effects to fish and fish habitat (Chapter 9). Given that no residual cumulative effects are predicted, the exercise of HLFN's Treaty 8 rights with respect to healthy populations of fish are not expected to differ between future conditions with the Project and future conditions without the Project.

20.9.4.10 Direct Destruction of Gathering Areas

Consultation efforts to date have not yielded information about HLFN gathering areas in the vicinity of the Project. A review of publically-available information, summarized in Section 20.10.2, does not identify HLFN gathering areas in the vicinity of the Project, as assessed in relation to the LSA for the Assessment of Terrestrial Ecosystem Effects (Chapter 11, Figure 11.6-1).

As described in the Assessment of Terrestrial Ecosystem Effects (Chapter 11), the Project is not predicted to result in significant adverse effects to harvestable plants. As described in the Assessment of Current Use of Lands and Resources for Traditional Purposes (Chapter 17), the Project is not predicted to result in significant adverse effects to gathering opportunities and practices, in relation to the quantity of resources, the quality of resources, access to resources, or the quality of experience of the natural environment.

Other current and reasonably foreseeable projects in the region were assessed for their potential to interact with the Project to create cumulative effects on terrestrial ecosystems (Chapter 11). The assessment predicts a cumulative residual effect of loss or alteration of harvestable plant quantity or quality for harvestable plants. The cumulative loss and alteration to harvestable plant habitat is difficult to accurately characterize because the location, type and quantity of harvestable plants within the region is unknown. Many of the ecosystems within the region can provide suitable habitat for harvestable plants and as such harvestable plant habitat was assessed in relation to effects on forested ecosystems. However, the effects to harvestable plant habitat are expected to be considerably less in extent than the loss and alteration reported for forested ecosystem. Furthermore, in certain cases, human derived alteration will increase the amount of harvestable plant habitat.

Loss and alteration of harvestable plants are considered not significant (Chapter 11). The magnitude of the direct effects to harvestable plants is considered moderate because although 33.7% of the available habitat could be lost or altered by cumulative effects, some of the human derived alteration will increase the amount of harvestable plants. Development activities such as timber harvesting can favour berry production by increasing the light available to plants and by reducing competing vegetation. Other cumulative effects to harvestable plants include nibbling loss of relevant habitat, physical transport of invasive plant propagules, spatial and temporal crowding in areas where multiple project effects intersect with harvestable plant habitat as well as additive effects from the accumulation of metals in some soils and subsequent plant uptake as well as growth inducing effects due to the creation of new edges. All of the effects are considered regional in extent and reversible in the long term. The duration of effects are expected to occur over the medium to long term depending on the relevant plant and its associated habitat requirements. In an ecological context, harvestable plants are considered neutral as they have some unique attributes, particularly to the local communities (discussed further in Chapter 16, Land Use). There is a medium level of confidence in the analyses because the effects to harvestable plants are generally well understood; however, uncertainty exists regarding the magnitude of alteration.

Given that available information does not indicate that HLFN gather within the Project footprint, the exercise of HLFN's Treaty 8 rights with respect to berries, medicines, and other plants is not expected to differ between future conditions with the Project and future conditions without the Project.

20.9.4.11 Water and Ecosystems

Consultation efforts to date have not yielded information about HLFN's its interests in water in ecosystems in the vicinity of the Project. Publically-available information does not indicate HLFN use of waters and ecosystems in the immediate vicinity of the Project (Section 17.4.8).

The Assessment of Groundwater Effects (Chapter 7) predicts that Project activities will result in water table drawdown, alteration of groundwater flow pattern, and potential reduction of groundwater discharge to the creeks. The effects are not predicted to be significant, as no groundwater wells exist in the underground mine area for water resource supply for human consumption, agriculture or industry usage, and that the predicted change on groundwater discharge into the M20 Camp Creek is relatively small.

The Assessment of Surface Water and Aquatic Resources Effects (Chapter 8) assessed the potential effects of the Project on water withdrawals and the quality of water effluent. The water balance model predicts minor streamflow changes to M17B, M19A, and M20 creeks. Given the minor magnitude, limited geographic extent, and reversibility of the effects, the Project is not expected to result in significant adverse effects to surface water quantity. The assessment addressed effects related to the quality of water effluent with respect to concentrations of total and dissolved metals, nutrients, and chemicals (anions). The water quality model predicts that pond water quality is reasonable for discharge without a requirement for water treatment for chemical parameters.

The Assessment of Terrestrial Ecosystem Effects (Chapter 11) predicts that Project activities may result in effects to ecosystem function and extend due to removal, windthrow, fragmentation, edge effects, and changes to hydrology. This effect is not predicted to be significant, as the magnitude of the effect is predicted to be minor and because only a small portion of forested ecosystems will be affected directly.

Given that available information does not indicate that HLFN members use waters and ecosystems in the immediate vicinity of the Project, the exercise of HLFN's Treaty 8 rights with respect to water and ecosystems is not expected to differ between future conditions with the Project and future conditions without the Project.

20.9.5 Summary of Residual Effects on Horse Lake First Nation's Treaty Rights and Related Interests

Project-related adverse effects on moose due to habitat loss and disruption of movement, while not significant, may reduce HLFN's moose hunting opportunities in the LSA. While residual cumulative effects on moose are predicted to be not significant (minor), the exercise of HLFN's Treaty 8 rights with respect to the quantity of wildlife may differ between future conditions with the Project and future conditions without the Project. In addition, should HLFN members choose to hunt within close proximity to the Project, the exercise of HLFN's Treaty 8 hunting rights may be affected due to Project-related sensory disturbance. The exercise of HLFN's Treaty 8 hunting rights with respect to the experience of the environment while hunting may differ between future conditions with the Project and future conditions without the Project.

20.10 EFFECTS ASSESSMENT FOR DOIG RIVER FIRST NATION

20.10.1 Consultation with Doig River First Nation

20.10.1.1 Engagement Activities Undertaken by the Proponent

The Proponent wrote to DRFN on April 25, 2014 to provide members with a plain language summary of the proposed Project and to summarize the types of information that will be included in the Application/EIS. The summary also outlined the Proponent's understanding of DRFN's Aboriginal and treaty rights and interests as related to the Project, VCs of potential interest to DRFN, and HD Mining's proposed approach to assess potential impacts of the Project on Treaty 8 First Nations' Aboriginal and treaty rights and related interests. The Proponent invited DRFN's comment on the information and offered to meet with DRFN to discuss the information. The CEA Agency followed up with DRFN on May 9, 2014, encouraging DRFN to provide feedback on the documents. The Proponent followed up on May 27, 2014 to confirm DRFN receipt of the information. To date, DRFN has not provided a response to the Proponent or information regarding its members' rights and interests in respect of the Project area. DRFN has not raised any issues or concerns with respect to the Project.

20.10.1.2 Overview of the Doig River First Nation's Comments and Concerns

The Proponent has not received comments relating to the Project from DRFN.

20.10.1.3 Future Planned Engagement Activities

The Proponent will continue engage with DRFN throughout the Application/EIS review period as outlined in Chapter 2 of the Application/EIS. Planned engagement activities with DRFN include responding to DRFN's formal comments on the Application/EIS.

20.10.2 Baseline Conditions

20.10.2.1 Traditional Territory and Reserves

DRFN has two reserves: Doig River No. 206 and Beaton River No. 204 (North Half), with a combined area of 1358.1 ha (AANDC n.d.). The main community is located on Doig River No. 206, about 30 km northeast of Fort St. John (Figure 20-3.1)

DRFN (the Fort St. John Band) adhered to Treaty 8 on May 30, 1900. DRFN has defined a collective traditional territory together with other members of the T8TA. Encompassing the traditional territories of DRFN, PRFN, HRFN, and WMFN, the T8TA traditional territory covers 121,818 square km in north eastern BC and north western Alberta. DRFN has not identified a traditional territory pertaining solely to DRFN.

20.10.2.2 Ethnography and Language

DRFN are of Dane-Zaa decent. Of the total registered DRFN population of 301 members, 50 members can speak Dane-Zaa fluently and 200 can understand or speak Dane-Zaa somewhat (First Peoples' Language Map of BC n.d.-b).

20.10.2.3 Population and Governance

As of June, 2014, DRFN had a registered population of 301 members, with 129 members living on their own reserves, 15 members living on other reserves, and 157 members living off reserve (Aboriginal Affairs and Northern Development Canada n.d.-b). DRFN's on-reserve population decreased by 3.2% between 2006 and 2011 (Statistics Canada 2012b).

DRFN is governed by a Chief and two Councillors elected under the *Indian Act* election system (Aboriginal Affairs and Northern Development Canada n.d.-b).

20.10.2.4 Economy

DRFN continue to engage in a non-market subsistence economy. In addition, DRFN members are involved in a number of market-based economic activities, including road building, general contracting, forestry, first aid and safety services, oilfield maintenance and construction, and reclamation (Virtual Museum of Canada 2012).

20.10.2.5 Land Use Setting and Planning

DRFN members continue to use their territory for traditional purposes. In 2009, DRFN, together with WMFN and PRFN, signed five agreements with BC related to wildlife, provincial parks, land use planning, and economic benefits flowing from the use of Treaty 8 lands including: Amended Economic Benefits Agreement; Government-to-Government Protocol Agreement; Parks Collaborative Management Agreement; Wildlife Collaborative Management Agreement; and Strategic Land and Resource Planning Agreement (BC MARR 2010). Among other things, the Strategic Land and Resource Planning Agreement provides a framework for the establishment appropriate designations and other mechanisms to address the meaningful exercise of rights for the various "Treaty 8 Significant Areas," or areas identified by the parties as particularly critical to the preservation of the meaningful exercise of Treaty 8 First Nations' rights. In May 2010, DRFN, together with WMFN and Prophet River First Nation, signed a final agreement and four resource management agreements with BC, including: Crown Land Management Agreement; Heritage Conservation Memorandum of Understanding; Long-term Oil and Gas Agreement; and Forests and Range Resource Management Agreement (BC MARR 2010).

20.10.2.6 Summary of Doig River First Nation's Treaty Rights

As a signatory to Treaty 8, DRFN has the right to "pursue their usual vocations of hunting, trapping, and fishing throughout the tract surrendered heretofore described, subject to such regulations as may from time to time be made by the Government of the country, acting under the authority of Her Majesty, and saving and excepting such tracts as may be required or taken up from time to time for settlement, mining, lumbering, trading, or other purposes."

20.10.2.7 Past, Present and Anticipated Future Uses of the Project Area by Doig River First Nation

Review of publically available information did not identify DRFN use of the Project area (Section 17.4.11).

20.10.3 Scope of the Assessment

20.10.3.1 Valued Components Suggested by Doig River First Nation for Inclusion in the Application/Environmental Impact Statement

DRFN has not suggested VCs for inclusion in the Application/EIS.

20.10.3.2 Incorporation of Doig River First Nation's Traditional Knowledge and other Views into the Assessment

The Proponent has not obtained information about DRFN's traditional knowledge and other views in relation to the Project.

20.10.3.3 Identification of Measurable Parameters

Measurable parameters for DRFN include: hunting practices, trapping practices, and fishing practices.

20.10.4 Assessment of Effects on Doig River First Nation

The Project is not expected to interact with or affect DRFN's hunting practices, trapping practices, or fishing practices.

20.10.5 Summary of Residual Effects on Doig River First Nation

The Project is not expected to result in any residual effects on DRFN's Aboriginal and treaty rights and related interests.

20.11 EFFECTS ASSESSMENT FOR FORT NELSON FIRST NATION

20.11.1 Consultation with Fort Nelson First Nation

20.11.1.1 Engagement Undertaken by the Proponent

The Proponent wrote to FNFN on April 25, 2014 to provide members with a plain language summary of the proposed Project and to summarize the types of information that will be included in the Application/EIS. The summary also outlined the Proponent's understanding of FNFN's Aboriginal and treaty rights and interests as related to the Project, VCs of potential interest to FNFN, and HD Mining's proposed approach to assess potential impacts of the Project on Treaty 8 First Nations' Aboriginal and treaty rights and related interests. The Proponent invited FNFN's comment on the information and offered to meet with FNFN to discuss the information. The CEA Agency followed up with FNFN on May 9, 2014, encouraging FNFN to provide feedback on the documents. The Proponent followed up on May 27, 2014 to confirm FNFN receipt of the information. On the same date, the Proponent provided another set of documents to FNFN via email. To date, FNFN has not provided a response to the Proponent or information regarding its members' rights and interests in respect of the Project area. FNFN has not raised any issues or concerns with respect to the Project.

20.11.1.2 Overview of Fort Nelson First Nation's Comments and Concerns

The Proponent has not received comments relating to the Project from FNFN.

20.11.1.3 Future Planned Engagement Activities

The Proponent will continue engage with FNFN throughout the Application/EIS review period as outlined in Chapter 2 of the Application/EIS. Planned engagement activities with FNFN include responding to FNFN's formal comments on the Application/EIS.

20.11.2 Baseline Conditions

20.11.2.1 Traditional Territory and Reserves

FNFN has four reserves totalling 9,752.6 ha (Aboriginal Affairs and Northern Development Canada n.d.-c). The main community is located on Fort Nelson Indian Reserve #2, on the confluence of the Muskwa and Nelson rivers and on both banks of the Nelson River, 6 km southeast of Fort Nelson at mile 293–295 on the Alaska Highway.

FNFN (the Fort Nelson Slave Band) adhered to Treaty 8 in 1910. FNFN defines a traditional territory within the larger Treaty 8 lands (Figure 20.11-1). This territory does not overlap with the Project area.

20.11.2.2 Ethnography and Language

FNFN members are of Dene K'e and Cree descent. Of the total registed FNFN population of 892, 58 speak Dene Tha fluently, 128 can understand or speak the language somewhat, and 154 are learning the language (First Peoples' Language Map of BC n.d.-c).

20.11.2.3 Population and Governance

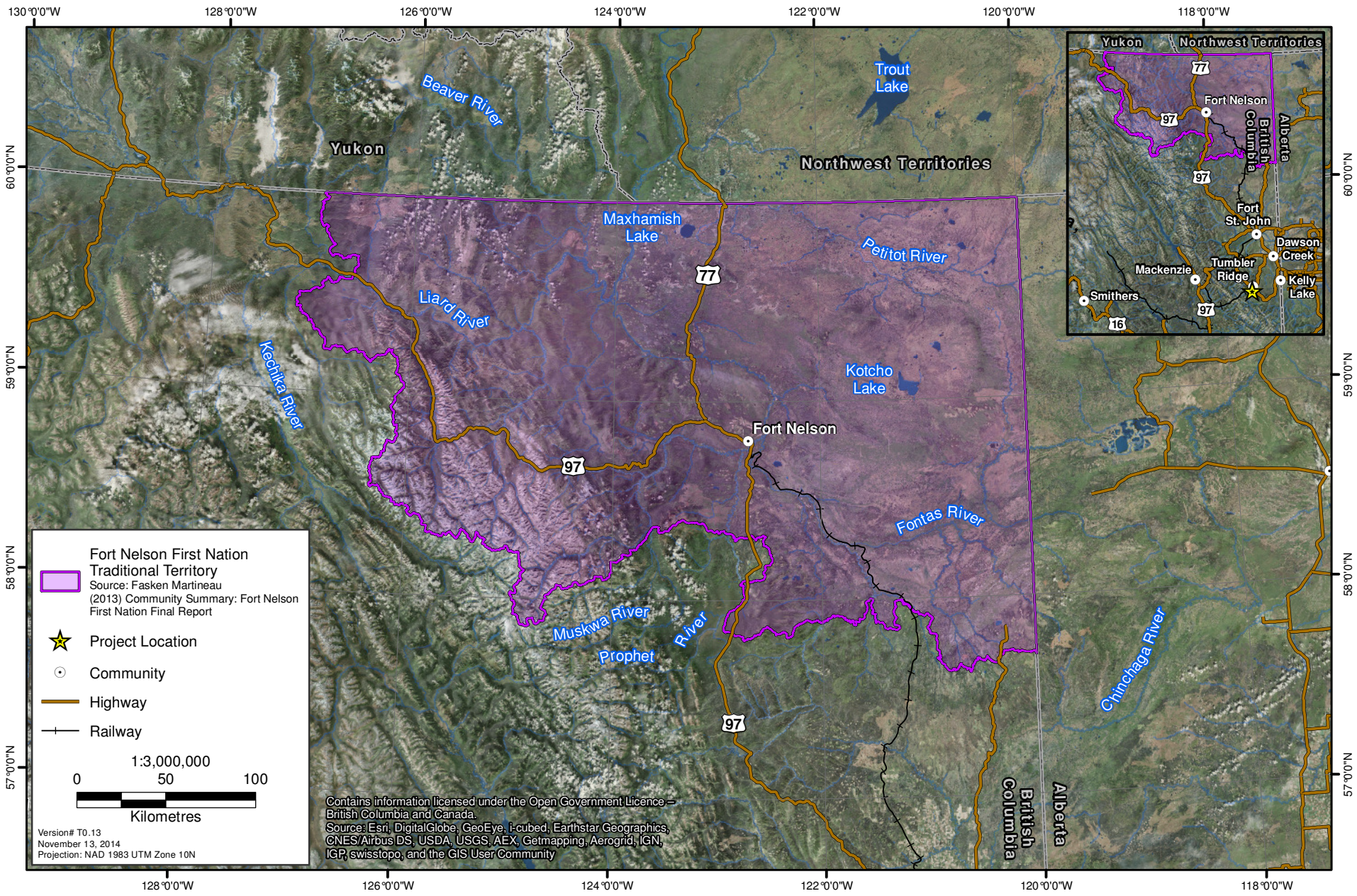
As of June, 2014, FNFN had a registered population of 892, with 428 members living on their own reserve, 25 members living on other reserves, and 437 living off reserve. (Aboriginal Affairs and Northern Development Canada n.d.-c). The FNFN on-reserve population increased by 27.3% between 2006 and 2011 (Statistics Canada 2012c).

FNFN members are governed by a Chief and five Councillors elected under the *Indian Act* election system (Aboriginal Affairs and Northern Development Canada n.d.).

20.11.2.4 Economy

FNFN's economic activities include Eh Cho Dene Enterprises, Liard Hotsprings Lodge, a 50% ownership of an Ensign drilling rig, and a gravel pit, as well as a new partnership with Black Diamond Dene, Northwestel, TransCanada Pipeline, and Spectra (Fort Nelson First Nation n.d.).

Figure 20.11-1
Fort Nelson First Nation Traditional Territory



20.11.2.5 Land Use Setting and Planning

FNFN members continue to use their territory for traditional purposes. FNFN signed an Oil and Gas Consultation Agreement in and an Economic Benefits Agreement with BC in 2012 (BC n.d.).

20.11.2.6 Summary of Fort Nelson First Nation's Treaty Rights

As a signatory to Treaty 8, FNFN has the right to "pursue their usual vocations of hunting, trapping, and fishing throughout the tract surrendered heretofore described, subject to such regulations as may from time to time be made by the Government of the country, acting under the authority of Her Majesty, and saving and excepting such tracts as may be required or taken up from time to time for settlement, mining, lumbering, trading, or other purposes."

20.11.2.7 Past, Present and Anticipated Future Uses of the Project Area by Fort Nelson First Nation

Review of publically available information did not identify FNFN use of the Project area (Section 17.4.14).

20.11.3 Scope of the Assessment

20.11.3.1 Valued Components Suggested by Fort Nelson First Nation for Inclusion in the Environmental Impact Statement

FNFN has not suggested VCs for inclusion in the Application/EIS

20.11.3.2 Incorporation of Fort Nelson First Nation's Traditional Knowledge and other Views into the Assessment

The Proponent has not obtained information about FNFN's traditional knowledge and other views in relation to the Project.

20.11.3.3 Identification of Measurable Parameters

Measurable parameters for FNFN include: hunting practices, trapping practices, and fishing practices.

20.11.4 Assessment of Effects on Fort Nelson First Nation

The Project is not expected to interact with or affect FNFN's hunting practices, trapping practices, or fishing practices.

20.11.5 Summary of Residual Effects on Fort Nelson First Nation

The Project is not expected to result in any residual effects on FNFN's Aboriginal and treaty rights and related interests.

20.12 EFFECTS ASSESSMENT FOR HALFWAY RIVER FIRST NATION

20.12.1 Consultation with Halfway River First Nation

20.12.1.1 Engagement Undertaken by the Proponent

The Proponent wrote to HRFN on April 25, 2014 to provide members with a plain language summary of the proposed Project and to summarize the types of information that will be included in the Application/EIS. The summary also outlined the Proponent's understanding of HRFN's Aboriginal and treaty rights and interests as related to the Project, VCs of potential interest to HRFN, and HD Mining's proposed approach to assess potential impacts of the Project on Treaty 8 First Nations' Aboriginal and treaty rights and related interests. The Proponent invited HRFN's comment on the information and offered to meet with HRFN to discuss the information. The CEA Agency followed up with HRFN on May 9, 2014, encouraging HRFN to provide feedback on the documents. The Proponent followed up on May 27, 2014 to confirm HRFN receipt of the information. On the same date, the Proponent provided HRFN with a further copy of the documents via email. To date, HRFN has not provided a response to the Proponent or information regarding its members' rights and interests in respect of the Project area. HRFN has not raised any issues or concerns with respect to the Project.

20.12.1.2 Overview of Halfway River First Nation's Comments and Concerns

The Proponent has not received comments relating to the Project from HRFN.

20.12.1.3 Future Planned Engagement Activities

The Proponent will continue engage with HRFN throughout the Application/EIS review period as outlined in Chapter 2 of the Application/EIS. Planned engagement activities with HRFN include responding to HRFN's formal comments on the Application/EIS.

20.12.2 Baseline Conditions

20.12.2.1 Traditional Territory and Reserves

HRFN has one reserve, Halfway River No. 168, with an area of 3,988.8 ha (Aboriginal Affairs and Northern Development Canada n.d.-d). HRFN's main community is located on the north bank of the Halfway River, about 100 km northwest of Fort St. John.

Relatives of the present-day HRFN adhered to Treaty 8 when they accepted treaty annuities at Hudson's Hope in 1914. HRFN has defined a traditional territory as a member of the Treaty 8 Tribal Association, within a traditional land use study prepared in relation to the Site C Clean Energy Project. Encompassing the traditional territories of HRFN, DRFN, PRFN, and WMFN, the T8TA traditional territory covers 121,818 square km in north eastern BC and north western Alberta. HRFN has not identified a traditional territory pertaining solely to HRFN.

20.12.2.2 Ethnography and Language

HRFN members are of Dane-zaa (Beaver) descent. Of the total HRFN registered population of 268, 53 members speak Dane-zaa fluently, 187 understand or speak Dane-zaa somewhat, and 15 members are learning to speak Dane-zaa (First Peoples' Language Map of BC n.d.-d).

20.12.2.3 Population and Governance

As of June 2014, HRFN had a registered population of 268, with 145 members living on reserve, four members living on other reserves, and 119 members living off reserve (Aboriginal Affairs and Northern Development Canada n.d.-d). The HRFN on-reserve population increased by 66.7% between 2006 and 2011(Statistics Canada 2012d).

HRFN members are governed by a Chief and two Councillors elected under the *Indian Act* election system (Aboriginal Affairs and Northern Development Canada, n.d.).

20.12.2.4 Economy

HRFN is involved in gravel excavation and sales. HRFN members are primarily employed in the resource and service sectors, as well as in manufacturing and construction (Aboriginal Affairs and Northern Development Canada, n.d.).

20.12.2.5 Land Use Setting and Planning

HRFN members continue to use their territory for traditional purposes. HRFN does not have any agreements with BC pertaining to land use and planning.

20.12.2.6 Summary of Halfway River First Nation's Treaty Rights

As a signatory to Treaty 8, HRFN has the right to "pursue their usual vocations of hunting, trapping, and fishing throughout the tract surrendered heretofore described, subject to such regulations as may from time to time be made by the Government of the country, acting under the authority of Her Majesty, and saving and excepting such tracts as may be required or taken up from time to time for settlement, mining, lumbering, trading, or other purposes."

20.12.2.7 Past, Present and Anticipated Future Uses of the Project Area by Halfway River First Nation

Review of publically available information did not identify HRFN use of the Project area (Section 17.4.13).

20.12.3 Scope of the Assessment

20.12.3.1 Valued Components Suggested by Halfway River First Nation for Inclusion in the Environmental Impact Statement

HRFN has not suggested VCs for inclusion in the Application/EIS.

20.12.3.2 Incorporation of Halfway River First Nation's Traditional Knowledge and other Views into the Assessment

The Proponent has not obtained information about HRFN's traditional knowledge and other views in relation to the Project.

20.12.3.3 Identification of Measurable Parameters

Measurable parameters for HRFN include: hunting practices, trapping practices, and fishing practices.

20.12.4 Assessment of Effects on Halfway River First Nation

The Project is not expected to interact with or affect HRFN's hunting practices, trapping practices, or fishing practices.

20.12.5 Summary of Residual Effects on Halfway River First Nation

The Project is not expected to result in any residual effects on HRFN's Aboriginal and treaty rights and related interests.

20.13 EFFECTS ASSESSMENT FOR PROPHET RIVER FIRST NATION

20.13.1 Consultation with Prophet River First Nation

20.13.1.1 Engagement Undertaken by the Proponent

The Proponent wrote to PRFN on April 25, 2014 to provide members with a plain language summary of the proposed Project and to summarize the types of information that will be included in the Application/EIS. The summary also outlined the Proponent's understanding of PRFN's Aboriginal and treaty rights and interests as related to the Project, VCs of potential interest to PRFN, and HD Mining's proposed approach to assess potential impacts of the Project on Treaty 8 First Nations' Aboriginal and treaty rights and related interests. The Proponent invited PRFN's comment on the information and offered to meet with PRFN to discuss the information. The CEA Agency followed up with PRFN on May 9, 2014, encouraging PRFN to provide feedback on the documents. The Proponent followed up on May 27, 2014 to confirm PRFN receipt of the information. To date, PRFN has not provided a response to the Proponent or information regarding its members' rights and interests in respect of the Project area. PRFN has not raised any issues or concerns with respect to the Project.

20.13.1.2 Overview of Prophet River First Nation's Comments and Concerns

The Proponent has not received comments relating to the Project from PRFN.

20.13.1.3 Future Planned Engagement Activities

The Proponent will continue engage with HRFN throughout the Application/EIS review period as outlined in Chapter 2 of the Application/EIS. Planned engagement activities with PRFN include responding to PRFN's formal comments on the Application/EIS.

20.13.2 Baseline Conditions

20.13.2.1 Traditional Territory and Reserves

PRFN (also known as Denetsaa Tse K'Nai) has one reserve, Prophet River No. 4, with an area of 373.9 ha. (Aboriginal Affairs and Northern Development Canada n.d.-e). The reserve is located approximately 100 km south of Fort Nelson on Highway 97.

Relatives of PRFN adhered to Treaty 8 on August 15, 1910 and August 4, 1911. PRFN has defined a traditional territory as a member of the Treaty 8 Tribal Association, within a traditional land use study prepared in relation to the Site C Clean Energy Project. Encompassing the traditional territories of PRFN, HRFN, DRFN, and WMFN, the T8TA traditional territory covers 121,818 square km in north eastern BC and north western Alberta. PRFN describes its traditional lands as covering approximately 25,000 km² from the Rocky Mountains to the boreal forest east of the Prophet River (Timberland Consultants Ltd. 1998). PRFN's traditional land area, as described, does not overlap with the Project area.

20.13.2.2 Ethnography and Language

PRFN members are of Dane-zaa (Beaver) descent. Of the total PRFN registered population of 266, 25 members speak Dane-zaa fluently, 68 members understand or speak Dane-zaa somewhat, and 15 members are learning to speak Dane-zaa (First Peoples' Language Map of BC n.d.-e).

20.13.2.3 Population and Governance

As of June 2014, PRFN had a registered population of 266 members, with 104 members living in their own reserve, 9 members living on other reserves, and 152 members living off reserve (Aboriginal Affairs and Northern Development Canada n.d.-e).

PRFN members are governed by a Chief and two Councillors elected under a custom electoral system (Aboriginal Affairs and Northern Development Canada n.d.-e).

20.13.2.4 Economy

The PRFN's economic activities include a restaurant and commercial services, camps, and catering (Treaty 8 Tribal Association n.d.).

20.13.2.5 Land Use Setting and Planning

PRFN members continue to use their territory for traditional purposes. In 2009, PRFN, together with WMFN and DRFN, signed five agreements with BC related to wildlife, provincial parks, land use

planning, and economic benefits flowing from the use of Treaty 8 lands including: Amended Economic Benefits Agreement; Government-to-Government Protocol Agreement; Parks Collaborative Management Agreement; Wildlife Collaborative Management Agreement; and Strategic Land and Resource Planning Agreement (BC n.d.). Among other things, the Strategic Land and Resource Planning Agreement provides a framework for the establishment appropriate designations and other mechanisms to address the meaningful exercise of rights for the various "Treaty 8 Significant Areas," or areas identified by the parties as particularly critical to the preservation of the meaningful exercise of Treaty 8 First Nations' rights. In May 2010, PRFN, together with WMFN and DRFN, signed a final agreement and four resource management agreements with BC, including: Crown Land Management Agreement; Heritage Conservation Memorandum of Understanding; Long-term Oil and Gas Agreement; and Forests and Range Resource Management Agreement (BC n.d.).

20.13.2.6 Summary of Prophet River First Nation's Treaty Rights

As a signatory to Treaty 8, PRFN has the right to "pursue their usual vocations of hunting, trapping, and fishing throughout the tract surrendered heretofore described, subject to such regulations as may from time to time be made by the Government of the country, acting under the authority of Her Majesty, and saving and excepting such tracts as may be required or taken up from time to time for settlement, mining, lumbering, trading, or other purposes."

20.13.2.7 Past, Present and Anticipated Future Uses of the Project Area by Prophet River First Nation

Review of publically available information did not identify HRFN use of the Project area (Section 17.4.12).

20.13.3 Scope of the Assessment

20.13.3.1 Valued Components Suggested by Prophet River First Nation for Inclusion in the Environmental Impact Statement

PRFN has not suggested VCs for inclusion in the Application/EIS.

20.13.3.2 Incorporation of Prophet River First Nation's Traditional Knowledge and other Views into the Assessment

The Proponent has not obtained information about PRFN's traditional knowledge and other views in relation to the Project.

20.13.3.3 Identification of Measurable Parameters

Measurable parameters for PRFN include: hunting practices, trapping practices, and fishing practices.

20.13.4 Assessment of Effects on Prophet River First Nation

The Project is not expected to interact with or affect PRFN's hunting practices, trapping practices, or fishing practices.

20.13.5 Summary of Residual Effects on Prophet River First Nation

The Project is not expected to result in any residual effects on PRFN's Aboriginal and treaty rights and related interests.

20.14 EFFECTS ASSESSMENT FOR SUCKER CREEK FIRST NATION

20.14.1 Consultation with Sucker Creek First Nation

20.14.1.1 Engagement Undertaken by the Proponent

The Proponent wrote to SCFN on April 25, 2014 to provide members with a plain language summary of the proposed Project and to summarize the types of information that will be included in the Application/EIS. The summary also outlined the Proponent's understanding of SCFN's Aboriginal and treaty rights and interests as related to the Project, VCs of potential interest to SCFN, and HD Mining's proposed approach to assess potential impacts of the Project on Treaty 8 First Nations' Aboriginal and treaty rights and related interests. The Proponent invited SCFN's comment on the information and offered to meet with SCFN to discuss the information. The CEA Agency followed up with SCFN on May 9, 2014, encouraging SCFN to provide feedback on the documents. The Proponent followed up on May 27, 2014 to confirm SCFN receipt of the information. To date, SCFN has not provided a response to the Proponent or information regarding its members' rights and interests in respect of the Project area. SCFN has not raised any issues or concerns with respect to the Project.

20.14.1.2 Overview of Sucker Creek First Nation's Comments and Concerns

The Proponent has not received comments relating to the Project from SCFN.

20.14.1.3 Future Planned Engagement Activities

The Proponent will continue engage with SCFN throughout the Application/EIS review period as outlined in Chapter 2 of the Application/EIS. Planned engagement activities with SCFN include responding to SCFN's formal comments on the Application/EIS.

20.14.2 Baseline Conditions

20.14.2.1 Traditional Territory and Reserves

SCFN is a historic signatory to Treaty 8. The SCFN community is located on one 5,987 ha reserve, Sucker Creek 150A, at the southwest end of Lesser Slave Lake at Enilda, approximately 22 km east of High Prairie, Alberta. As at June 2014, the SCFN had a registered population of 2,719 people – 760 persons living on-reserve, 8 members living on band-owned Crown Land, 1 member living on Crown Land, and 1,950 persons off-reserve (AANDC 2013). The 2011 Census reported an on-reserve population of 677, an 14% increase from 2006 when 594 people lived on the reserve (Stats Can 2012a).

20.14.2.2 Ethnography and Language

SCFN is descended from the Cree ethnolinguistic group and speak the Creek language.

20.14.2.3 Population and Governance

As of June 2014, SCFN had a registered population of 2,719 members, with 719 members living on reserve, 42 members living on other reserves, 1,950 living off reserve (Aboriginal Affairs and Northern Development Canada n.d.-f). The SCFN on-reserve population increased by 14% between 2006 and 2011 (Statistics Canada 2012e).

SCFN is governed by a Chief and six Councillors who serve for a three-year term. They are elected according to a custom electoral system (AANDC 2013). SCFN is also a member of the Lesser Slave Lake Indian Regional Council (LSLIRC).

20.14.2.4 Economy

According to the 2011 National Household survey, of the total population of Sucker Creek 150A over the age of 15, about 57% were in the labour force, with an employment rate of 43% and an unemployment rate of 26%. About 57% of community members were employed in public administration, health and social assistance, and educational services, likely related to the band administration and band services on reserve. About 18% are employed in resource industries, construction and transportation (Statistics Canada 2013).

The LSLIRC was formed to improve the economic and social conditions of First Nations people in the Lesser Slave Lake district, and to encourage economic development with member nations, including SCFN.

20.14.2.5 Land Use Setting and Planning

SCFN members continue to use lands and resources for traditional purposes.

20.14.2.6 Summary of Sucker Creek First Nation's Treaty Rights

As a signatory to Treaty 8, SCFN has the right to "pursue their usual vocations of hunting, trapping, and fishing throughout the tract surrendered heretofore described, subject to such regulations as may from time to time be made by the Government of the country, acting under the authority of Her Majesty, and saving and excepting such tracts as may be required or taken up from time to time for settlement, mining, lumbering, trading, or other purposes."

20.14.2.7 Past, Present and Anticipated Future Uses of the Project Area by Sucker Creek First Nation

Review of publically available information did not identify HRFN use of the Project area (Section 17.4.15).

20.14.3 Scope of the Assessment

20.14.3.1 Valued Components Suggested by Sucker Creek First Nation for Inclusion in the Environmental Impact Statement

SCFN has not suggested VCs for inclusion in the Application/EIS.

20.14.3.2 Incorporation of Sucker Creek First Nation's Traditional Knowledge and other Views into the Assessment

The Proponent has not obtained information about SCFN's traditional knowledge and other views in relation to the Project.

20.14.3.3 Identification of Measurable Parameters

Measurable parameters for SCFN include: hunting practices, trapping practices, and fishing practices.

20.14.4 Assessment of Effects on Sucker Creek First Nation

Measurable parameters for SCFN include: hunting practices, trapping practices, and fishing practices.

20.14.5 Summary of Residual Effects on Sucker Creek First Nation

The Project is not expected to result in any residual effects on SCFN's Aboriginal and treaty rights and related interests.

20.15 EFFECTS ASSESSMENT FOR KELLY LAKE METIS SETTLEMENT SOCIETY MEMBERS

20.15.1 Consultation with Kelly Lake Metis Settlement Society

20.15.1.1 Engagement Undertaken by the Proponent

KLMSS wrote to the CEA Agency on April 29, 2013 to outline its views on the proposed Project. KLMSS provided the following comments:

- Since the project is disturbing surface and underground land and water, since access to the proposed project will be via the Hart Highway (which members of the community frequently use to access harvesting locations), and since the project has a long operational life, there are possible adverse environmental effects that are of importance to KLMSS.
- There are potential changes to the environment that may be caused by the proposed project that may result in changes to health and socio-economic conditions, physical and cultural heritage, current use of lands or resources for traditional purposes and/or structures, sites or things of historical, archaeological, paleontological or architectural significance.
- There are potential project impacts to current and future Kelly Lake Métis Aboriginal rights.
- KLMSS is in favour of a thorough, detailed and scientifically sound EA process that meaningfully integrates KLMSS ATK as one component of responsible resource development planning and consultation efforts.

- The recommendation of KLMSS at this time to require full-scope federal EA for the proposed Murray River Coal Project with the aim of mitigating potential effects to the Aboriginal rights of current and future generations of Kelly Lake Métis people.

The Proponent wrote to KLMSS on April 25, 2014 to provide members with a plain language summary of the proposed Project and to summarize the types of information that will be included in the Application/EIS. The summary also outlined the Proponent's understanding of Métis' Aboriginal rights and interests as related to the Project, VCs of potential interest to Metis, and the Proponent's proposed approach to assess potential impacts of the Project on Metis' Aboriginal rights and related interests. The Proponent invited KLMSS's comment on the information and offered to meet with KLMSS to discuss the information. The CEA Agency followed up with KLMSS on May 9, 2014, encouraging KLMSS to provide feedback on the documents. The Proponent followed up on May 27, 2014 to confirm KLMSS receipt of the information. KLMSS wrote to the Proponent on June 8, 2014 indicating its preference that the process outlined in the documents for assessing potential effects on Aboriginal rights will be carried out.

20.15.1.2 Overview of Kelly Lake Metis Settlement Society's Comments and Concerns

KLMSS has not raised any concerns about the Project.

20.15.1.3 Future Planned Engagement Activities

The Proponent will continue engage with KLMSS throughout the Application/EIS review period as outlined in Chapter 2 of the Application/EIS. Planned engagement activities with KLMSS include responding to KLMSS' formal comments on the Application/EIS.

20.15.2 Baseline Conditions

20.15.2.1 Traditional Territory

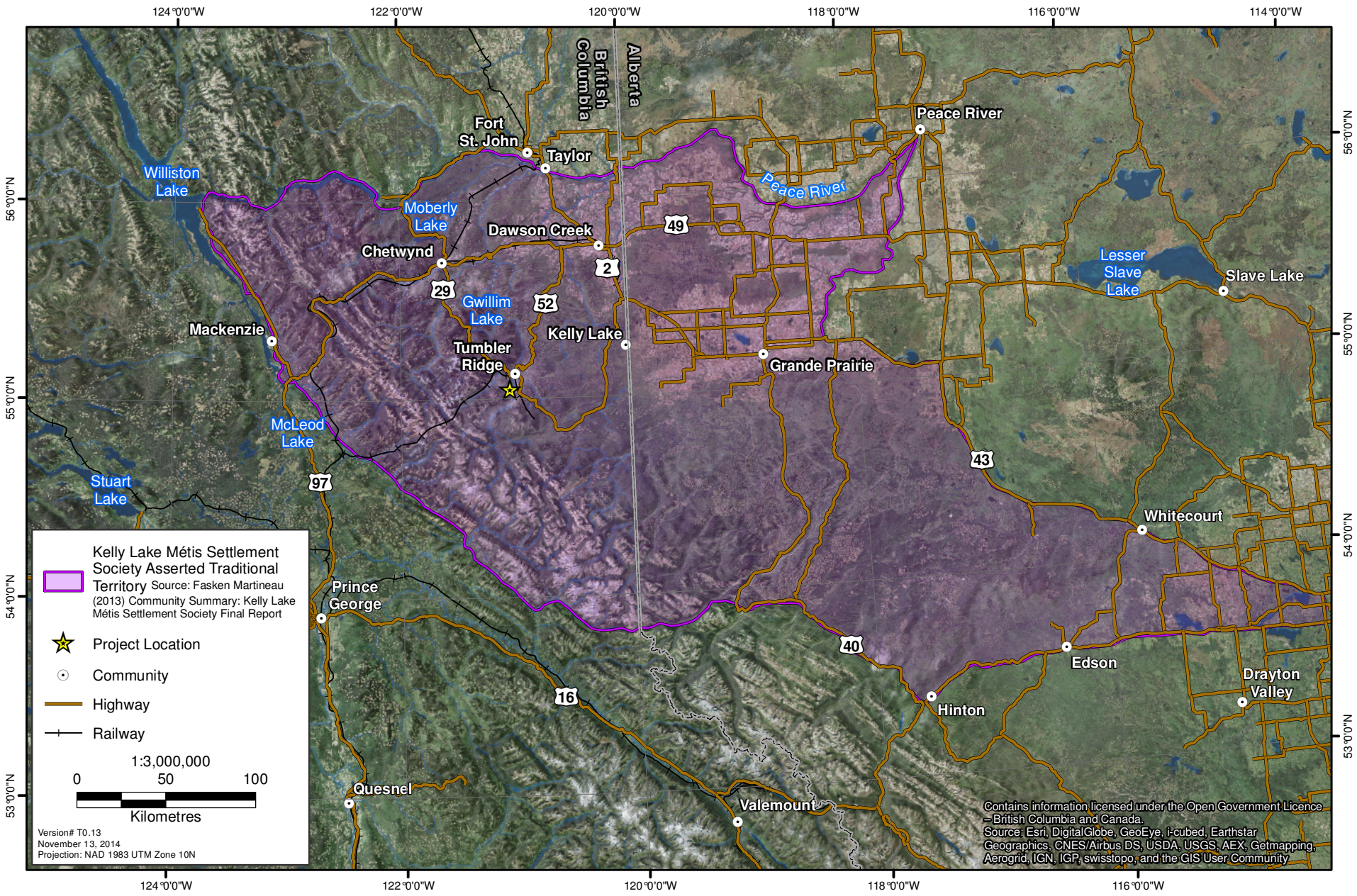
The unincorporated community of Kelly Lake is located 56 km southwest of Dawson Creek, British Columbia and 40 km west of Beaverlodge, Alberta. The community is 65 km northeast of the Project area, and is 1.5 km to the west of the BC-Alberta border.

KLMSS traditional territory (Figure 20.15-1) extends from the Continental Divide in the west, to Peace River, Alberta and Lac St. Anne, Alberta in the east, and from the south side of the Peace River in the north to Hinton, Alberta in the south (Davison and Danda 2012).

20.15.2.2 Ethnography and Language

Many KLMSS members have ancestral and familial ties to BRFN, WMFN and SFN, but maintain their Métis identity (Davison and Danda 2012). Most residents trace their ancestry from the unions of Cree speaking women and French Canadian fur traders who resided in the Red River settlements of Manitoba in the early 1800s (Robinson 1983). KLMSS asserts that it is the only historic Métis community resident in BC.

Figure 20.15-1
Kelly Lake Métis Traditional Territory



KLMSS asserts that the Cree language spoken at Kelly Lake is coloured with modifications of words that reveal the community's French ancestry, however it is unclear whether this language would qualify as a form of Michif (see Section 20.3.14.2). It is estimated that most KLMSS members over the age of 30 years speak the Cree language (Davison and Danda 2012).

20.15.2.3 Population and Governance

Population estimates from within the community vary from the Statistics Canada population counts. KLMSS reported in 2010 that 160 members were residing in Kelly Lake (KLMSS 2010). The 2011 census, however, recorded a total of 109 people living in Kelly Lake [5] (KLCN 2009; KLMSS 2010; Stats Can 2012b).

KLMSS registered under the Societies Act on April 26, 2012 to advocate for their community's Aboriginal rights, and to pursue economic and social benefits of development for the Kelly Lake Métis. It is governed by a set of bylaws and ratified its first constitution in 2006 (Davison and Danda 2012). KLMSS is affiliated with the BC Métis Federation (BC Métis Federation 2012).

20.15.2.4 Economy

Kelly Lake residents often leave the community to obtain gainful employment despite the number of resource development being undertaken within the KLMSS Traditional Territory. The average income, reported in 2005, was estimated to be between $20,000 and $25,000 per annum (KLMSS 2010) (Davison and Danda 2012).

20.15.2.5 Land Use Setting and Planning

KLMSS members continue to use lands and resources for traditional purposes (Davison and Danda 2012). Details regarding KLMSS current use of lands and resources is located in Appendix 17-A.

20.15.2.6 Summary of Kelly Lake Metis Settlement Society Member's Aboriginal Rights

The Aboriginal rights of Metis peoples are recognized and affirmed under section 35 of the *Constitution Act, 1982*. Aboriginal rights are the collective rights of Aboriginal peoples to engage in an activity that is an element of a practice, custom or tradition integral to the distinctive culture of the Aboriginal group (R. v. Van der Peet, [1996] 2 S.C.R. 507). Activities specific to Metis peoples are considered as Aboriginal rights if they meet the test set out in R. v. Powley, [2003] 2 S.C.R. 207, 2003 SCC 43. Specific criteria include: characterization of the right; identification of the historic rights bearing community; identification of the contemporary rights bearing community; verification of membership in the contemporary Métis community; identification of the relevant time; was the practice integral to the claimant's distinctive culture; continuity between the historic practice and the contemporary right; extinguishment; infringement; and, justification.

[5] The discrepancy may be in part due to differences between the Kelly Lake people and Statistics Canada in the definition of community boundaries. Many of the Kelly Lake members may be included within the boundaries of Electoral Area 'D', since the Kelly Lake Unincorporated Area was included within the larger Electoral Area in the previous (2006) Census.

20.15.2.7 Past, Present and Anticipated Future Uses of the Project Area by Kelly Lake Metis Settlement Society Members

The KLMSS identifies hunting and trapping areas on the east side of the Murray River around Quintette and Hambler lakes (Section 17.4).

20.15.3 Scope of the Assessment

20.15.3.1 Valued Components Suggested by the Kelly Lake Metis Settlement Society for Inclusion in the Environmental Impact Statement

KLMSS has not suggested VCs for inclusion in the Application/EIS.

20.15.3.2 Incorporation of the Kelly Lake Metis Settlement Society's Traditional Knowledge and other Views into the Assessment

The Proponent has not obtained information about KLMSS' traditional knowledge and other views in relation to the Project.

20.15.3.3 Identification of Measurable Parameters

Measurable parameters for KLMSS include: hunting practices, trapping practices, and fishing practices.

20.15.4 Assessment of Effects on Kelly Lake Metis Settlement Society Members

The KLMSS identifies hunting and trapping areas on the east side of the Murray River around Quintette and Hambler lakes (Section 17.4).

The Assessment of Wildlife Effects (Chapter 13) assessed effects of the Project on caribou, moose, mountain goat, elk, grizzly bear, furbearers, bats, raptors, songbirds, waterbirds, and amphibians. The Project is not predicted to result in significant adverse effects to caribou, as caribou are a high elevation species and the Project is located at a low elevation in a valley. Effects on elk are predicted to be negligible, as the Project will result in a relatively small direct and functional (i.e. sensory disturbance-related) loss of habitat and/or disruption to movement. The Project is not predicted to result in significant adverse effects to wildlife health resulting from contamination soil or water contamination (Chapter 18: Assessment of Health Effects). The Project design no longer includes an overland conveyor belt. The Project is not predicted to result in significant adverse effects to human health in relation to the consumption of country foods (Chapter 18: Assessment of Health Effects).

The Project is predicted to adversely affect the migration patterns of grizzly bears and furbearers, due disruption of movement (Chapter 13: Assessment of Wildlife Effects). Mitigation measures proposed by the Proponent include: giving wildlife the right-of-way along access roads and the highway and enforcing speed limits along on-site Project roads.. Effects of disruption to movement on grizzly bears are predicted to be not significant as grizzly bears have very large home ranges and move across the landscape continuously and have a variety of habitats that they use for movement. The effect will be reversible once operations cease. Effects of disruption of movement on furbearers

are predicted to be not significant as some riparian habitat is anticipated to be undisturbed within the Mine Site Assessment Footprint that would continue to allow furbearer movement past the Project area. The effect is reversible over the long term through reclamation activities.

Other current and reasonably foreseeable projects in the region were assessed for their potential to interact with the Project to create cumulative effects on wildlife (Chapter 13: Assessment of Wildlife Effects, section 13.11; Chapter 21: Federal Cumulative Effects Assessment, section 21.12). The cumulative effects assessment identified residual cumulative effects for moose and grizzly bear. Residual cumulative effects for moose include reduction in available high-quality habitat and reduced movement of moose along the Murray River. The residual cumulative effect for grizzly bear is reduced movement of grizzly bear along the Murray River.

Past and present developments in the RSA have resulted in the loss and alteration of 4.9% and 3.5% of moose habitat, respectively. The Project will remove and alter an additional 0.2% and 0.7% of late winter habitat. Additional future projects will remove and alter an additional 0.9% and 3.1% of moose late winter habitat. The majority of future effects are due to, in decreasing order: wind power projects, oil and gas, and mining. The total area of habitat removed due to all past, present and future activities is 1,178 ha of winter habitat, or 5.9% of the high quality habitat in the RSA. Assuming a moose density of 0.003 moose/ha, this area is equivalent to the home ranges of 3.5 moose.

The cumulative effect on moose habitat is rated as not significant (minor) for the following reasons:

- the cumulative effect will result in a relatively small amount of habitat loss;
- several forms of habitat alteration are beneficial to the moose population;
- the effect is reversible as both forestry and most mining operations are suitable for reclamation post-closure;
- the resiliency of the moose population to disturbed and fragmented habitat is relatively high; and
- moose are common throughout BC.

The distribution of infrastructure along Murray River due to mining and forestry operations was evaluated as a residual cumulative effect on the disruption of movement of moose north and south through the Murray River corridor. The Wolverine River corridor will be relatively unaffected by the Project, with the exception of rail traffic twice a day. The combination of all past, present and future activities on the MRRMZ will result in the removal of 9.8% (155 ha) of winter habitat and the further alteration of an additional 14.2% (224 ha) of habitat.

The cumulative effect of disruption of moose movement is assessed as not significant (minor) for the following reasons:

- the residual effect of disruption of moose movements is expected to have a minor magnitude;

- the effect will be reversible long term because of reclamation activities of development areas along the Murray River;
- the resiliency of the moose population to disturbed and fragmented habitat is relatively high;
- moose are common throughout BC.

Currently, 11.2% of grizzly bear spring habitat has been lost in the Murray River Resource Management Zone (MRRMZ), largely due to transportation corridors and 34.3% has been altered, largely by forestry. The addition of the Murray River project would remove an additional 2.3% and alter an additional 1.2% of spring habitat for grizzly bears in the MRRMZ. Additional future projects, largely oil and gas, may cause the loss and alteration of an additional 3.4% and 6.7% of spring habitat for a total of 17% lost and 42% altered. Note that the altered habitat is largely forestry cutblocks and pipeline rights of way, which grizzly bears may use to forage or movements (Nielsen et al. 2004).

The cumulative effect of disruption to grizzly bear movement is assessed as not significant (moderate) for the following reasons:

- Due to the relatively high proportion of habitat lost and altered in the MRRMZ, the magnitude of the effect is rated as medium. However, this effect is mitigated, to some degree, by the movement habits of grizzly bears. Bears have very large home ranges and move across the landscape continuously and have a variety of habitats that they use for movement, including riparian, mid elevation and alpine;
- It is not expected that this effect will have local or regional population-scale effects; and
- The effect will be reversible in the long-term once the projects end. Bears may temporarily avoid habitats where there is a barrier to their movement, but are expected to re-occupy the habitat once the disturbance is removed.

Project-related adverse effects on moose and grizzly due to habitat loss and disruption of movement, while not significant, may reduce KLMSS' moose and grizzly hunting opportunities in the LSA. While residual cumulative effects on moose and grizzly are predicted to be not significant (minor), the exercise of KLMSS' Aboriginal rights with respect to the quantity of wildlife may differ between future conditions with the Project and future conditions without the Project.

In addition, depending on particular hunting and trapping sites, the exercise of WMFN's Treaty 8 hunting rights may be affected due to Project-related sensory disturbance and perceived reduction in the quality of harvested resources (Section 17.7).

Other foreseeable future mining, hydroelectric, and other commercial activities, such as oil and gas exploration have the potential to act cumulatively with the Project by adding to the visual and auditory changes in the LSA. This is a spatial/temporal crowding effect in that it reduces the number of hunting and trapping locations in the LSA considered to be free of auditory or visual disturbances (Section 17.10.2.6). Other foreseeable future mining, hydroelectric, and other commercial activities, such as oil and gas exploration, also have the potential to act cumulatively with the Project by reducing the number of wildlife harvesting areas thought to be free of

contamination by Aboriginal groups. This is a nibbling loss effect in that it contributes incrementally to perceived contamination of country foods (Section 17.10.2.6).

Consequently, the exercise of KLMSS' Treaty 8 hunting rights with respect to the experience of the environment while hunting and trapping and perceived reduction in the quality of harvested resources may differ between future conditions with the Project and future conditions without the Project.

20.15.5 Summary of Residual Effects on Kelly Lake Metis Settlement Society Members

Project-related adverse effects on moose and grizzly due to habitat loss and disruption of movement, while not significant, may reduce KLMSS' moose hunting opportunities in the LSA. While residual cumulative effects on moose and grizzly are predicted to be not significant (minor), the exercise of KLMSS' Aboriginal rights with respect to the quantity of wildlife may differ between future conditions with the Project and future conditions without the Project. In addition, the exercise of KLMSS' Aboriginal hunting rights may be affected due to Project-related sensory disturbance (depending on particular hunting and trapping sites) and perceived quality of harvested resources. The exercise of KLMSS' hunting rights with respect to the experience of the environment while hunting and trapping and perceived quality of harvested resources may differ between future conditions with the Project and future conditions without the Project.

20.16 EFFECTS ASSESSMENT FOR METIS NATION BRITISH COLUMBIA MEMBERS

20.16.1 Consultation with Metis Nation British Columbia

20.16.1.1 Engagement Undertaken by the Proponent

MNBC provided a letter to the CEA Agency on March 2, 2013, outlining its views about the proposed Project. MNBC provided the following comments:

- The construction and operation of the proposed Murray River Coal Project could put local Métis Aboriginal rights and traditional land-uses at risk.
- Métis harvesters who rely on the direct and surrounding area for sustenance, social and ceremonial purposes could see negative impacts from the construction and operation of the proposed Murray River Coal Project.
- There is current traditional harvesting (hunting, fishing, and plant harvesting for foods and medicines) occurring in the proposed project area, therefore the perpetuation of Métis traditional knowledge and land-use activities could be negatively impacted.
- In addition, we have recently mapped cultural heritage sites as well as sites of historic significance in the area.

The Proponent wrote to MNBC on April 25, 2014 to provide members with a plain language summary of the proposed Project and to summarize the types of information that will be included in the Application/EIS. The summary also outlined the Proponent's understanding of Metis' Aboriginal rights and interests as related to the Project, VCs of potential interest to Metis, and the

Proponent's proposed approach to assess potential impacts of the Project on Metis' Aboriginal rights and related interests. The Proponent invited MNBC's comment on the information and offered to meet with MNBC to discuss the information. The CEA Agency followed up with MNBC on May 9, 2014, encouraging MNBC to provide feedback on the documents.

MNBC wrote to the Proponent on May 16, 2014 to "to clarify Métis rights, traditional knowledge, MNBC structure, geography, mobility, and community to assist the proponent in developing methods [to assess Project effects on Metis rights]." The MNBC letter suggests that the assessment of potential effects on Metis rights should take into consideration Metis traditional knowledge, Metis mobility, and Metis community. MNBC's letter states that "recent Occupation and Use as well as Traditional Use studies carried out in the local and regional area suggest a Métis use by MNBC citizens." The Proponent responded to MNBC by letter on June 13, 2014, ensuring incorporation of MNBC comments in the Application/EIS and seeking to identify MNBC's preferred approach to share materials related to Metis use of the Project area. To date, the Proponent has not met with MNBC to identify Metis use of the Project area, but will assess information brought forward by MNBC once a meeting has been arranged and information has been provided.

20.16.1.2 Overview of the Metis Nation British Columbia's Comments and Concerns

MNBC has not raised specific concerns about the Project.

20.16.1.3 Future Planned Engagement Activities

The Proponent will continue engage with MNBC throughout the Application/EIS review period as outlined in Chapter 2 of the Application/EIS. Planned engagement activities with MNBC include responding to MNBC's formal comments on the Application/EIS.

20.16.2 Baseline Conditions

20.16.2.1 Métis Nation British Columbia Chartered Communities

Two Métis Chartered Communities are located near the Project: The North East Métis Association, and the Moccasin Flats Métis Society, in Dawson Creek and Chetwynd (MNBC 2012-2014).

MNBC does not claim territories; instead, on behalf of their citizens, they assert rights and traditional uses over the entire province (MNBC 2010).

20.16.2.2 Ethnography and Language

The Métis are descendants from the union of European (predominantly French and Scottish) men and First Nation women during the 17th and 18th century fur trade who have developed their own cultural identity, settlements, language, and traditions (MNC n.d.) (Section 20.3.1.5).

The primary language spoken by Métis in BC is English, though the traditional Métis language is Michif. The Métis Nation Provincial Survey (MNPS) from 2006 reported that less than 5% of the Métis population surveyed speak Michif themselves; almost 15% indicated that Michif was spoken

by someone in their home. Despite the fact that the language is not widely spoken, over two-thirds of the respondents indicated that they were interested in learning Michif (BC Provincial Health Officer 2009).

20.16.2.3 Population and Governance

Approximately 3,375 Métis reside in the Peace River Regional District (PRRD), including 145 Métis within the District of Tumbler Ridge, and 175 Métis in the District of Chetwynd (Statistics Canada 2013d). There were also historical Métis Communities in Moccasin Flats, Hessler Flats, Taylor and Fellers Heights (letter from MNBC to the proponent, April 2014).

MNBC is the governing body in British Columbia recognized by the Métis National Council (Section 20.3.1.5). MNBC provides services to its communities, including programming related to children and families, culture, economic development, education, employment and training, health, natural resources, sport, veterans, women, and youth (MNBC 2012-2014).

20.16.2.4 Economy

In 2006, the unemployment rate for Métis people in BC was 9.4%, compared to 5.6% for the non-Aboriginal population. The median employment income for Métis people in BC was $38,035 (BC MARR 2010-2011). This is congruent with the MNPS which reported 55% of Métis household incomes being lower than $40,000 per year (MNBC n.d.).

MNBC administers the Métis Employment and Training Program to improve the employment potential, earning capacity and self-sufficiency of Métis people in BC (MNBC 2012-2014).

20.16.2.5 Land Use Setting and Planning

The Métis have had an established community in the BC Northeast for more than 200 years and still use the land and resources for traditional purposes.

The Natural Resources Act (Revised 2010) of MNBC allows harvesting of fish and wildlife for food, social, ceremonial, and traditional (but not commercial) purposes. To harvest for these purposes, MNBC harvesting cards can be applied for by Métis citizens. MNBC harvesting cards apply only to species, areas, and times of year, as described by regulations developed by the BC Métis Assembly of Natural Resources. Currently, harvesting cards only replace the Canadian Migratory Bird license; they do not, on their own, authorize freshwater fishing, saltwater fishing, hunting (other than migratory birds), cutting timber, or trapping (MNBC 2012-2014).

20.16.2.6 Summary of Metis Nation British Columbia Member's Aboriginal Rights

The Aboriginal rights of Metis peoples are recognized and affirmed under section 35 of the *Constitution Act, 1982*. Aboriginal rights are the collective rights of Aboriginal peoples to engage in an activity that is an element of a practice, custom or tradition integral to the distinctive culture of the Aboriginal group (R. v. Van der Peet, [1996] 2 S.C.R. 507). Activities specific to Metis peoples are considered as Aboriginal rights if they meet the test set out in R. v. Powley, [2003] 2 S.C.R. 207,

2003 SCC 43. Specific criteria include: characterization of the right; identification of the historic rights bearing community; identification of the contemporary rights bearing community; verification of membership in the contemporary Métis community; identification of the relevant time; was the practice integral to the claimant's distinctive culture; continuity between the historic practice and the contemporary right; extinguishment; infringement; and, justification.

20.16.2.7 Past, Present and Anticipated Future Uses of the Project Area by Metis Nation British Columbia Members

As described in Section 20.16.1, MNBC state that Metis may use the Project area. To date, the Proponent has not met with MNBC to identify Metis use of the Project area, but will assess information brought forward by MNBC once a meeting has been arranged and information has been provided.

20.16.3 Scope of the Assessment

20.16.3.1 Valued Components Suggested by Metis Nation British Columbia for Inclusion in the Environmental Impact Statement

MNBC has not suggested VCs for inclusion in the Application/EIS.

20.16.3.2 Incorporation of Metis Nation British Columbia Member's Traditional Knowledge and other Views into the Assessment

The Proponent has not obtained information about MNBC's traditional knowledge and other views in relation to the Project.

20.16.3.3 Identification of Measurable Parameters

Measurable parameters for MNBC include: hunting practices, trapping practices, and fishing practices.

20.16.4 Assessment of Effects on Metis Nation British Columbia Members

Review of publically-available information has not identified use of the Project area by MNBC members. The Proponent will continue to engage with MNBC to determine if MNBC members exercise Aboriginal rights in the vicinity of the Project. Should any evidence of use be provided, potential effects and mitigation measures will be determined during the Application/EIS review stage.

20.17 SUMMARY OF ABORIGINAL AND TREATY RIGHTS AND RELATED INTERESTS

The Project is not expected to result in adverse effects to key resources and other factors related to the exercise of the Aboriginal and treaty rights and related interests of DRFN, FNFN, HRFN, PRFN, SCFN, or MNBC. Consequently, the Project is not predicted to adversely affect the Aboriginal and treaty rights and related interests of these groups.

The Project may affect the Aboriginal and treaty rights and related interests of WMFN, SFN, MLIB, BRFN, HLFN, and KLMSS. Table 20.17-1 identifies potential residual effects on Aboriginal groups' Aboriginal and treaty rights and related interests and key accommodation measures.

Table 20.17-1. Potential Residual Effects on Aboriginal and Treaty Rights and Related Interests and Accommodation Measures

Potential Residual Effects On First Nations Activities	Accommodation Measures
Hunting rights: The exercise of Aboriginal and treaty rights with respect to the quantity of populations of game (WMFN, SFN, MLIB, BRFN, HLFN), experience of the environment while hunting and trapping (WMFN, SFN, MLIB, BRFN, HLFN), and perceived quality of harvested resources (WMFN, SFN, KLMSS) may differ between future conditions with the Project and future conditions without the Project.	The Proponent will work with Aboriginal groups to facilitate their participation in ongoing monitoring, during pre-mine, during construction and operations, and post-mine periods. The Proponent will work to maintain Aboriginal groups' continuity of use via ongoing monitoring to prevent the creation of 'avoidance areas' for Aboriginal peoples. The Proponent will engage in ongoing communication with Aboriginal groups, including translation of technical reports for Aboriginal membership.
Fishing rights (SFN): The Project may affect SFN's fishing rights due to: reduced quality of fishing experience associated with Project-related noise and visual changes; and reduced perceived quality of fishing resources. The exercise of SFN's Treaty 8 rights may differ between future conditions with the Project and future conditions without the Project with respect to quality of experience while fishing and perceived quality of fish resources.	
Gathering rights (SFN): The success of SFN's gathering activities in the LSA may be adversely affected due to loss and alteration of harvestable plants in the LSA. SFN members may perceive reduced quality of resources gathered in the LSA, despite a prediction of no residual effects on country foods. While residual cumulative effects on harvestable plants are predicted to be not significant, the exercise of SFN's Treaty 8 rights with respect to berries, medicines, and other plants may differ between future conditions with the Project and future conditions without the Project. In addition, the exercise of SFN's Treaty 8 gathering rights with respect to the experience of the environment while gathering and the perceived quality of gathered resources may differ between future conditions with the Project and future conditions without the Project.	
Cultural, spiritual, and ceremonial rights (SFN): SFN cultural, spiritual and ceremonial resources could be adversely affected by Project activities during Construction and Operation. Depending on their locations, a SFN sacred site, medicinal plant gathering area, and general trapping area may be adversely affected during site clearing and/or SFN access to the sites may be restricted during the life of the Project. The Project may adversely affect SFN cultural continuity related to teaching of children, due to sensory disturbance. Future conditions for the exercise of SFN's cultural, spiritual, and ceremonial treaty rights are expected to differ between future conditions with the Project and future conditions without the Project.	The Proponent will work with SFN prior to Construction to identify land use sites utilized by SFN members for cultural, spiritual, and ceremonial uses, and sites may provide visual contact with the Project. Should such site be determined, the Proponent will work with SFN to develop appropriate accommodation measures.
Habitation rights (SFN): If SFN habitations (a previous cabin and a camping site) overlap with the Project footprint, the habitations could potentially be adversely affected due to site clearing activities during Construction. SFN members access to these sites will be restricted. Given these potential direct effects, SFN's exercise of its Treaty 8 rights with respect to habitation resources is may differ between future conditions with the Project and future conditions without the Project.	The Proponent will work with SFN prior to Construction to identify the locations of the previous cabin and campsite. The Proponent will work with SFN to develop appropriate avoidance and/or other accommodation measures.

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