19 CURRENT USE OF LANDS AND RESOURCES FOR TRADITIONAL PURPOSES

19.1 Approach

The Project has the potential to change the land, water, or resources, or access to lands, water or resources used by Aboriginal groups for traditional purposes. The key indicators for this valued component (VC) are as follows:

- Current use of lands and resources for hunting, fishing, and trapping activities, including the location of the activity, the species targeted, and the traditional uses of the harvested animals
- Current use of lands and resources for activities other than hunting, fishing, and trapping by Aboriginal groups, including the nature, location, and traditional use purpose

Aboriginal interests with respect to this VC are presented in the form of an issues tracking table, included in Volume 1 Appendix H Aboriginal Information Distribution and Consultation Supporting Documentation. Summaries of the consultation on the Project carried out by BC Hydro with each of the 29 Aboriginal groups identified in Table 9.2 in Volume 1 Section 9 Information Distribution and Consultation are included in Volume 5 Appendix A Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests, and Information Requirements Supporting Documentation, Part 2. Drawing from those consultation summaries, a current use summary is included in Volume 3 Appendix F Current Use of Lands and Resources for Traditional Purposes Summary.

This VC is linked to the following VCs also considered in the assessment of the Project:

- Volume 2 Section 12 Fish and Fish Habitat
- Volume 2 Section 13 Vegetation and Ecological Communities
- Volume 2 Section 14 Wildlife Resources
- Volume 3 Section 24 Harvest of Fish and Wildlife Resources
- Volume 3 Section 25 Outdoor Recreation and Tourism
- Volume 3 Section 26 Navigation
- Volume 4 Section 33 Human Health

Volume 5 Section 34 Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests, and Information Requirements will examine the potential adverse impacts of the Project on the exercise of asserted or established Aboriginal rights and treaty rights.

19.1.1 Regulatory and Policy Setting

As specified in the EIS Guidelines, the *Canadian Environmental Assessment Act* (CEAA), 2012 informed the effects assessment for the current use of lands and resources for traditional purposes VC. Section 5(1) of the CEAA identifies that:

> "for the purposes of this Act, the environmental effects that are to be taken into account in relation to an act or thing, a physical activity, a designated project or a project are… (c) with respect to Aboriginal peoples, an effect occurring in Canada of any change that may be caused to the environment on… (iii) the current use of lands and resources for traditional purposes."

19.1.2 Key Issues and Identification of Potential Effects

Issues, concerns and interests identified during consultation with Aboriginal groups and government agencies guided the scope of the assessment of Current Use of Lands and Resources for Traditional Purposes (Volume 1 Section 9 Information Distribution and Consultation). The list of issues and the approaches used to address them are outlined in Table 19.1.

Table 19.1 Key Issues: Current Use of Lands and Resources for Traditional Purposes

Key Issues	Approach to Addressing Key Issues
Concern about the potential effects of the Project on access to quality hunting areas, including areas that contain moose, elk, deer, bear, and birds. Concern about potential effects from Project-related activities, such as the Highway 29 realignment and the Peace Reach Pit, on hunting. Specific hunting areas of concern include: ▪ The arc from the upper Halfway to Hudson's Hope to Moberly Lake to Upper and Lower Pine watershed ▪ Pine/Peace confluence ▪ B.C./Alberta border to Smoky/Peace River confluence, to Caldotte/Peace River confluence, to Notikewin/Peace River confluence ▪ Boucher Lake/Peace Moberly Tract area ▪ Between Moberly Lake and Peace Rivers ▪ Northwest of Hudson's Hope ▪ Upstream of Clear/Peace River confluence (Blueberry River First Nations, Dene Tha' First Nation, Duncan's First Nation, Fort Nelson First Nation, McLeod Lake Indian Band, Salt River First Nation, Saulteau First Nations, Treaty 8 Tribal Association: Doig River, Halfway River, Prophet River and West Moberly First Nations)	An assessment of the potential effects of the Project on the current use of lands and resources for traditional purposes is presented in Volume 3 Section 19 Current Use of Lands and Resources for Traditional Purposes. Using the baseline information described in Section 19.2, and the assessment in Volume 2 Section 14 Wildlife Resources, the assessment considers the potential for change in access to areas used for hunting purposes, and to areas where specific wildlife resources may be located. The Local Assessment Area and the Regional Assessment Area are described in Section 19.1.5 in Volume 3 Section 19 Current Use of Lands and Resources for Traditional Purposes. The first, second, fourth, fifth and possibly the sixth bullets listed in the left column are at least partly within the Local Assessment Area for the Current Use of Lands and Resources for Traditional Purposes VC, and are considered in the assessment where use of those areas has been identified by Aboriginal groups.

Key Issues	Approach to Addressing Key Issues
Concerns about the potential effects of the Project on fishing, including access, water flow, water levels and habitat. Concern that the reservoir will cause members to have reduced knowledge of fishing and success at fishing. Specific fishing areas of concern include: ▪ B.C./Alberta border to Many Islands ▪ Many Islands to Dunvegan ▪ Dunvegan to Peace/Smoky River confluence and north to Notikewin Provincial Park ▪ Saddle Creek/Peace confluence to upstream of Peace River ▪ Peace River downstream of Farrell Creek ▪ Downstream of Hudson's Hope ▪ Peace River above the dam ▪ North bank Peace upstream of Taylor Bridge ▪ Lower reaches of Pine River/at Beatton/Peace confluence up to Charlie Lake and upper Beatton River/on Peace River at B.C./Alberta border ▪ Pine/Peace confluence ▪ Clear/Peace confluence ▪ Many Islands and at Fourth Creek/Peace Confluence ▪ Many Islands to Dunvegan ▪ Dunvegan to Notikewin/Peace River confluence (Athabasca Chipewyan First Nation, Blueberry River First Nations, Dene Tha' First Nation, Deninu K'ue First Nation, Duncan's First Nation, Fort Nelson First Nation, Horse Lake First Nation, McLeod Lake Indian Band, Mikisew Cree First Nation, Saulteau First Nations, Treaty 8 Tribal Association: Doig River, Halfway River, Prophet River and West Moberly First Nations)	An assessment of the potential effects of the Project on the current use of lands and resources for traditional purposes is presented in Volume 3 Section 19 Current Use of Lands and Resources for Traditional Purposes. Using the baseline information described in Section 19.2, and the assessment in Volume 2 Section 12 Fish and Fish Habitat, the assessment considers the potential for change in access to areas used for fishing purposes, and to areas where specific fisheries resources may be located. The Local Assessment Area and Regional Assessment Area are described in Section 19.1.5. The areas identified in the first bullet and in fourth through ninth bullets, are least partly within the Local Assessment Area for the Current Use of Lands and Resources for Traditional Purposes VC, and are considered in the assessment where use of those areas has been identified by Aboriginal groups.
Concern about the potential effects of the Project on trapping, including access, animal density, and reduction of habitat. Concern that the Project will occupy approximately 204 ha of one trapline, comprising a loss of habitat for animals, medicinal plants, bear dens, licks, etc. Concern about increased traffic and public access and the potential disturbance of traps. Interest in BC Hydro avoiding the creation of new access points in trapline areas, such as 4X4 trails. Concern that trapping activities will be eliminated within the Project inundation areas and may also be affected by migration and disturbance effects. (Dene Tha' First Nation, Saulteau First Nations, Treaty 8 Tribal Association: Doig River, Halfway River, Prophet River and West Moberly First Nations)	An assessment of the potential effects of the Project on the current use of lands and resources for traditional purposes is presented in Volume 3 Section 19 Current Use of Lands and Resources for Traditional Purposes. Using the baseline information described in Section 19.2, and the assessment in Volume 3 Section 24 Harvest of Fish and Wildlife Resources, the assessment considers the potential for change in access to areas used for trapping activities, and to areas where specific trapped species may be located. The Local Assessment Area and the Regional Assessment Area are described in Section 19.1.5. An assessment of the potential effects of the Project on reported registered trapline harvest volumes, trapline operations and revenue is included in Section 24.4 in Volume 3 Section 24 Harvest of Fish and Wildlife Resources.

Key Issues	Approach to Addressing Key Issues
Concern about potential effects of the Project on trapping activity on the Peace by Duncan's First Nation that is not documented in current Traditional Land Use Studies, but is known to have taken place historically. (Duncan's First Nation)	An assessment of the potential effects of the Project on the current use of lands and resources for traditional purposes is presented in Volume 3 Section 19 Current Use of Lands and Resources for Traditional Purposes. The baseline information, described in Section 19.2, has been developed considering traditional land use studies done for the Project, information provided by Aboriginal groups during the consultation process, and other publicly available information.
Meaningful assessment of reasonably anticipated future use of lands and resources for traditional purposes by the Treaty 8 First Nations (T8FNs) must consider future scenario without the existing flood reserve. (Treaty 8 Tribal Association: Doig River First Nation, Halfway river First Nation, Prophet River First Nation, and West Moberly First Nations)	The potential effects of the Project on the current and reasonably anticipated future use of lands and resources for traditional purposes have been assessed in Section 19 Effects Assessment on the basis that if the proposed Project does not proceed, the lands within the Flood Reserve will, for the reasonably anticipated future, remain in the same state as they are found in today, whether or not the Flood Reserve is removed.
Concern about the potential effects of the Project on berry harvesting and plant gathering. (Blueberry River First Nations, Dene Tha' First Nation, Duncan's First Nation, Kelly Lake Metis Settlement Society, Saulteau First Nations, Treaty 8 Tribal Association: Doig River, Halfway River, Prophet River and West Moberly First Nations)	An assessment of the potential effects of the Project on the current use of lands and resources for traditional purposes is presented in Volume 3 Section 19 Current Use of Lands and Resources for Traditional Purposes. Using the baseline information described in Section 19.2, and the assessment in Volume 2 Section 13 Vegetation and Ecological Communities, the assessment considers the potential for change in access to areas used for gathering purposes, and to areas where specific plant resources may be located.
Concern about the potential effects of the Project on ancestral gathering places used for camping and habitation, fishing and hunting, travel routes, ceremonial and sacred areas, burials, trails, freshwater springs, and associated oral history, specifically in the areas of Bear Flats, Cache Creek, Halfway River, Moberly River, the Peace Moberly Tract, and the Area of Critical Community Interest. (Blueberry River First Nations, Saulteau First Nations, Treaty 8 Tribal Association: Doig River, Halfway River, Prophet River and West Moberly First Nations)	An assessment of the potential effects of the Project on the current use of lands and resources for traditional purposes is presented in Volume 3 Section 19 Current Use of Lands and Resources for Traditional Purposes. Using the baseline information described in Section 19.2, the assessment considers the potential for change in specific areas used by Aboriginal groups for traditional purposes. The Local Assessment Area is described in Section 19.1.5, and includes portions of the areas identified here where uses have been identified by Aboriginal groups.

Key Issues	Approach to Addressing Key Issues
Concern about increased access for recreational non-Aboriginal harvesters to the area, leading to increased pressure on wildlife and fish resources and increased competition for campsites. Interest in how BC Hydro is proposing to limit the hunting activities of the temporary workforce. (Blueberry River First Nations, Dene Tha' First Nation, Duncan's First Nation, Kwadacha First Nation, Saulteau First Nations, Treaty 8 Tribal Association: Doig River, Halfway River, Prophet River and West Moberly First Nations)	An assessment of the potential effects of the Project on the current use of lands and resources for traditional purposes is presented in Volume 3 Section 19 Current Use of Lands and Resources for Traditional Purposes. Section 24.4 Effects Assessment in Volume 4 Section 24 Harvest of Fish and Wildlife Resources considers changes in access for harvesting. BC Hydro will manage safety on its work sites in a variety of ways, including the management of firearms. This will include prohibiting personal firearms on its work sites, and by prohibiting workers from engaging in hunting activities during working hours, or within active work sites. In general, there will be limited private vehicle access to the south bank site. The participation of the workforce in hunting activities on their own time would be done as members of the public, under provincially regulated licensing systems.
Interest in collecting baseline traditional knowledge. Interest in incorporating traditional knowledge into the environmental assessment. (Athabasca Chipewyan First Nation, Blueberry River First Nation, Dene Tha' First Nation, Deninu K'ue First Nation, Kwadacha First Nation, Little Red River Cree Nation, Mikisew Cree First Nation, Smith's Landing First Nation, Treaty 8 Tribal Association: Doig River, Halfway River, Prophet River and West Moberly First Nations)	Where information respecting traditional knowledge has been made available to BC Hydro by Aboriginal groups, it has been incorporated into the baseline for those VCs to which it applies.
Concern that off-site infrastructure (roads, transmission lines, quarries, hauling, etc.) will have direct effects during construction, and will open territory to new industrial activities. (Treaty 8 Tribal Association: Doig River, Halfway River, Prophet River and West Moberly First Nations)	An assessment of the potential effects of the Project on the current use of lands and resources for traditional purposes is presented in Volume 3 Section 19 Current Use of Lands and Resources for Traditional Purposes. Using the baseline information described in Section 19.2, the assessment considers the potential for interaction between Project components and those identified uses of lands and resources. The assessment also considers the potential for change in specific areas used by Aboriginal groups for traditional purposes. The Local Assessment Area and the Regional Assessment Area are described in Section 19.1.5. An assessment of cumulative effects is presented in Section 19.5 for areas where any residual effects have been identified.
Concern that the Project will lead to a loss of access to certain sites that are associated with specific stories. If the sites are not accessible, the stories will not be told and may get lost over time. (Treaty 8 Tribal Association: Doig River, Halfway River, Prophet River and West Moberly First Nations)	An assessment of the potential effects of the Project on the current use of lands and resources for traditional purposes is presented in Volume 3 Section 19 Current Use of Lands and Resources for Traditional Purposes. Using the baseline information described in Section 19.2, the assessment considers the potential for change in access to areas used for traditional purposes.

Key Issues	Approach to Addressing Key Issues
Concern about potential impacts of the Project on cultural fragmentation, loss of cultural identity, and destruction of traditional way of life. (Blueberry River First Nations, Saulteau First Nations, Treaty 8 Tribal Association: Doig River, Halfway River, Prophet River and West Moberly First Nations)	Volume 3 Section 19 Current Use of Lands and Resources for Traditional Purposes provides an assessment of the potential effects of the Project on the current and reasonably anticipated future use of lands and resources for traditional purposes, including the potential effects on hunting, fishing, and trapping activities, and the use of lands and resources for activities other than hunting, fishing, and trapping by Aboriginal groups. Changes in the use of and access to culturally important places and valued landscapes is also considered in the assessment. An assessment on culture is not within the scope of the assessment on current use of lands and resources for traditional purposes.
Concern about the potential impacts of the Project on future generations and families, including: ▪ The ability for youth to sustain themselves and practice traditional activities ▪ Inter-generational respect and loss of time together for youth and elders ▪ Loss of educational areas for transfer of knowledge to the young ▪ Loss of land used for cultural camps to maintain the heritage of our relationship between elders and youth ▪ Impacts on opportunities for the transmission of Aboriginal languages ▪ Loss of opportunity for inter-band and family socialization and cultural exchange ▪ Loss of capacity to pass on and receive traditional knowledge ▪ Lack of control or voice in future land use (Athabasca Chipewyan First Nation, Blueberry River First Nations, Dene Tha' First Nation, Fort Chipewyan Métis Association, Métis Nation British Columbia, Mikisew Cree First Nation Saulteau First Nations, Treaty 8 Tribal Association: Doig River, Halfway River, Prophet River and West Moberly First Nations)	Volume 3 Section 19 Current Use of Lands and Resources for Traditional Purposes provides an assessment of the potential effects of the Project on the current and reasonably anticipated future use of lands and resources for traditional purposes, including the potential effects on hunting, fishing, and trapping activities, and the use of lands and resources for activities other than hunting, fishing, and trapping by Aboriginal groups. Changes in the use of and access to culturally important places and valued landscapes is considered in the assessment, including teaching sites.

Key Issues	Approach to Addressing Key Issues
Concern about reduced time on the land and sense of connectedness with the natural landscape. Reduced ability to travel on the land freely and in quiet enjoyment. Psycho-social dysfunction associated with loss of understanding of the land base, loss of connection to it, loss of faith in the health of traditional resources, and loss of control over changes occurring on the land. Concern that increased land alienation may lead to sedentary trend; lack of ability/desire to go out on land. (Saulteau First Nations, Treaty 8 Tribal Association: Doig River, Halfway River, Prophet River and West Moberly First Nations)	Volume 3 Section 19 Current Use of Lands and Resources for Traditional Purposes provides an assessment of the potential effects of the Project on the current and reasonably anticipated future use of lands and resources for traditional purposes, including the potential effects on hunting, fishing, and trapping activities, and the use of lands and resources for activities other than hunting, fishing, and trapping by Aboriginal groups. The assessment considers the changes in other cultural and traditional uses of the land, considering the following key aspects: ▪ Use of and access to areas for other cultural and traditional uses of the land (e.g., collection of food and medicinal plants) ▪ Availability of harvested species ▪ Use of and access to culturally important places and valued landscapes.
Concern with the maintenance of, or impacts to, opportunities for the transmission of customary law. (Athabasca Chipewyan First Nation, Dene Tha' First Nation, Mikisew Cree First Nation)	Volume 3 Section 19 Current Use of Lands and Resources for Traditional Purposes provides an assessment of the potential effects of the Project on the current and reasonably anticipated future use of lands and resources for traditional purposes, including the potential effects on hunting, fishing, and trapping activities, and the use of lands and resources for activities other than hunting, fishing, and trapping by Aboriginal groups. Changes in the use of and access to culturally important places and valued landscapes is considered, including teaching sites.
Concern about the loss of the Peace River islands, which have specific histories, some associated with particular dreamers and spiritual power. (Treaty 8 Tribal Association: Doig River, Halfway River, Prophet River and West Moberly First Nations)	Volume 3 Section 19 Current Use of Lands and Resources for Traditional Purposes provides an assessment of the potential effects of the Project on the current and reasonably anticipated future use of lands and resources for traditional purposes, including the potential effects on hunting, fishing, and trapping activities, and the use of lands and resources for activities other than hunting, fishing, and trapping by Aboriginal groups. Changes in the use of and access to culturally important places and valued landscapes is considered in the assessment, including teaching sites.
Concern that the flooding associated with the Project would create a loss of identity, values, cultural connectedness (individually and collectively). (This issue, concern, or interest was expressed by participants attending BC Hydro-led First Nations Integrated Resource Plan Workshops held in Prince George or Fort St. John in 2011 and 2012. Comments were not attributed unless requested by the participant.)	Volume 3 Section 19 Current Use of Lands and Resources for Traditional Purposes provides an assessment of the potential effects of the Project on the current and reasonably anticipated future use of lands and resources for traditional purposes, including the potential effects on hunting, fishing, and trapping activities, and the use of lands and resources for activities other than hunting, fishing, and trapping by Aboriginal groups. Changes in the use of and access to culturally important places and valued landscapes is considered in the assessment. An assessment on culture is not within the scope of the assessment on current use of lands and resources for traditional purposes.

Key Issues	Approach to Addressing Key Issues
Concern with lack of respect for DunneZa/Dane zaa culture as the first culture in the area. (Treaty 8 Tribal Association: Doig River, Halfway River, Prophet River and West Moberly First Nations)	Volume 3 Section 19 Current Use of Lands and Resources for Traditional Purposes provides an assessment of the potential effects of the Project on the current and reasonably anticipated future use of lands and resources for traditional purposes, including the potential effects on hunting, fishing, and trapping activities, and the use of lands and resources for activities other than hunting, fishing, and trapping by Aboriginal groups. Changes in the use of and access to culturally important places and valued landscapes is considered in the assessment.

Section 15.2.4 of the EIS Guidelines states that the potential to adversely affect current use of lands and resources by Aboriginal persons for traditional purposes will be assessed by taking into account the potential for the Project to result in changes to key aspects:

- Use of and access to lands used for traditional purposes
- Availability of harvested species based on the results of the assessment of the potential effects of the Project on fish and fish habitat, vegetation and ecological communities, and wildlife resources
- Other relevant considerations raised by Aboriginal groups

However, Section 19.4 Effects Assessment below presents the assessment of the potential to adversely affect current use of lands and resources for traditional purposes by taking into account the potential for the Project to result in changes to the following key aspects:

- Changes in fishing opportunities and practices
- Changes in hunting and trapping opportunities and practices
- Changes in other cultural and traditional uses of the land

The organization of key aspects differs from the EIS Guidelines in order to facilitate an analysis of specific current use of lands and resources for traditional purposes (e.g., fishing, hunting, and cultural and traditional uses) separately.

"Changes to cultural and traditional uses of the land" was added as a potential effect to take into account key aspects, including cabins and campsites, drinking water, firewood, feather gathering, trails and water routes, cultural and spiritual places, collection of food and medicinal plants, and use of and access to culturally important places and valued landscapes. These key aspects were designed to respond to concerns raised by Aboriginal groups.

"Opportunities" refers to the circumstances--temporal, spatial, and ecological--that invite the exercise of current use practices.

"Practices" refers to the regular performance of a technical or cultural skill, typically in hunting, fishing, trapping, or craftsmanship. It mixes customary activity, on the one hand, with intentional maintenance of tradition, such as the exercise of rights, on the other.

Table 19.2 Interactions of the Project With Current Use of Lands and Resources for Traditional Purposes

Project Activities and Physical Works	Key Aspects		
	Changes in Fishing Opportunities and Practices	Changes in Hunting and Trapping Opportunities and Practices	Changes in Other Cultural and Traditional Uses of the Land
Construction Phase			
Construction of Dam and Generating Station	✓	✓	✓
Construction of Reservoir	✓	✓	✓
Transmission System	✓	✓	✓
Quarried and Excavated Material Source	✓	✓	
Highway 29 Realignment	✓	✓	✓
Construction Access Roads	✓	✓	✓
Worker Accommodation	✓	✓	✓
Operations Phase			
Dam and Generating Station	✓	✓	✓
Reservoir Operations	✓	✓	✓
Transmission Line Operations	✓	✓	✓

NOTE:
Only Project interactions ranked as "2" Volume 2 Appendix A Project Interactions Matrix, Table 2 are carried forward to this table. A ✓ indicates that an activity is likely to contribute to the effect.

19.1.3 Standard Mitigation Measures and Effects Addressed

As shown in Volume 2 Appendix A Project Interaction Matrix, Table 2, a "1" ranking was given where an adverse effect may result from an interaction, but standard mitigation measures to avoid or minimize the potential effects are available and well understood to be effective, and any residual effect is negligible. These interactions were not carried forward through the effects assessment.

A "1" ranking was not assigned to any project components, activities, and physical works associated with the construction of the Project.

All other project activities listed in Table 2 of Volume 2 Appendix A Project Interactions Matrix were ranked "0," because no interaction is predicted between the Project and the current use of lands and resources for traditional purposes VC. Interactions with the following activities were ranked "0":

- Hudson's Hope shoreline protection maintenance

- Operation of the 500 kV lines
- Operational use of Portage Mountain and West Pine Quarries as required, including transportation of materials to the site.

19.1.4 Selection of Key Indicators

Section 15.2.3 of the EIS Guidelines states that the key indicators for the current use of lands and resources for traditional purposes VC will include the following:

- Current use of lands and resources for hunting, fishing, and trapping activities, including the location of the activity, the species targeted, and the traditional uses of the harvested animals
- Current use of lands and resources for activities other than hunting, fishing, and trapping by Aboriginal groups, including the nature, location, and traditional use purpose

A list of key indicators, including a rationale for their selection, is provided in Table 19.3.

Table 19.3 Key Indicators for Current Use of Lands and Resources for Traditional Purposes

Key Aspects	Key Indicators	Rationale for Selection of the Key Indicators [a]
Changes in fishing opportunities and practices	Current use of lands and resources for fishing Location of the activity Access to the activity Species targeted Use of the harvested species	Reflects Aboriginal concerns CEAA 2012
Changes in hunting and trapping opportunities and practices	Current use of lands and resources for hunting and trapping Location of the activity Access to the activity Species targeted Use of the harvested species	Reflects Aboriginal concerns CEAA 2012
Change in cultural and traditional uses of the land	Current use of areas for other cultural and traditional uses Use of the resource Access to the resource Location of the activity	Reflects Aboriginal concerns CEAA 2012

NOTE: [a] Includes input from consultation with government agencies and Aboriginal groups, as well as regulatory guidelines and policies

Location of current use activities is examined as an intrinsic part of current use of lands and resources, species targeted and use of the harvested species.

19.1.5 Spatial and Temporal Boundaries

19.1.5.1 Spatial Boundaries

The Local Assessment Area (LAA) and the Regional Assessment Area (RAA) for the current use of lands and resources for traditional purposes VC are depicted in Figures 19.1 and 19.2, and reported in Table 19.4. The LAA was defined in consideration of the expected maximum geographic extent of the potential for the Project

to cause an adverse effect on the VC current use of lands and resources for traditional purposes.

Both the LAA and the RAA are based on the spatial boundaries set out in other sections of the EIS, as follows:

- Fishing opportunities and practices: the LAA and RAA are based on the LAA and RAA for the fish and fish habitat VC (Figure 12.1 in Volume 2 Section 12 Fish and Fish Habitat). These spatial boundaries were defined by reviewing information including information from Traditional Land Use Studies (TLUS)
- Hunting and trapping opportunities: the LAA and RAA are based on the wildlife resources VC (Figure 14.1 Volume 2 Section 14 Wildlife Resources).
- Cultural and traditional uses of the land: the LAA and RAA are based on the LAA and RAA for the vegetation and ecological communities VC (Figure 13.1 in Volume 2 Section 13 Vegetation and Ecological Communities)

Table 19.4 Spatial Assessment Areas for Current Use of Lands and Resources for Traditional Purposes

Local Assessment Area	Regional Assessment Area
Fish and Fish Habitat LAA ▪ Peace River in the proposed reservoir area ▪ Tributaries entering the proposed reservoir ▪ Peace River downstream of the proposed Site C Dam to the Many Islands Area, Alberta (207 km) ▪ Watercourses and water bodies within the transmission line and roadway rights-of-way ▪ Watercourses and water bodies within the Project activity zone (construction materials) ▪ Riparian areas adjacent to identified watercourses and water bodies Vegetation and Ecological Communities, and Wildlife Resources LAA ▪ Project activity zone buffered by 1,000 m, including a 1,000 m buffer around the erosion impact line ▪ Peace River downstream of the proposed dam, buffered by 1,000 m from the south and north banks down to the Alberta border	Fish and Fish Habitat RAA: Peace River from Peace Canyon Dam, B.C. to Vermilion Chutes, Alberta Vegetation and Ecological Communities, and Wildlife Resources RAA: Five Wildlife Management Units – designated 7-31, 7-32, 7-33, 7-34, and 7-35.

19.1.5.2 Temporal Boundaries

The assessment has been conducted for the Project construction and operations phases, which are described in Volume 1 Section 4 Project Description.

The temporal description of the VC itself centres on the seasonality of the current use of lands and resources for traditional purposes – i.e., the “seasonal round” – and was based on Aboriginal traditional knowledge, as communicated in consultation and through Project-specific Traditional Land Use Studies, and ethnohistorical and other reports.

19.2 Information Sources and Methods

19.2.1 Literature Review

The following information was used to formulate the baseline and assist with assessment of potential effects on the current use of lands and resources for traditional purposes VC:

- Project description and other Project-related information
- Project-specific Traditional Land Use and knowledge studies or other Project-related information provided by ~~First Nations~~Aboriginal groups that included information on past, current, and future use of resources. The following ~~studies were~~information was received from~~by~~ Aboriginal groups~~First Nations~~ at the time of writing (All but the MCFN and ACFN report are included in Volume 5 Appendix A Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests, and Information Supporting Documentation):
    - Duncan's First Nation (General 2012c)
    - Blueberry River First Nation Traditional Land Use Study (Kennedy 2011)
    - Duncan's First Nation Ethnohistorical Review (Bouchard and Kennedy 2012b)
    - Horse Lake First Nation Ethnohistorical Overview (Bouchard and Kennedy 2012c)
    - Doig River First Nation, Prophet River First Nation, Halfway River First Nation, and West Moberly First Nation Traditional Land Use Study (Candler 2012b)
    - Saulteau First Nation Culture and Traditions Stud~~y~~ (Nesoo Watchie Resource Management Ltd. 2011)
    - Kelly Late Métis Settlement Society Aboriginal Traditional Knowledge Assessment (Davison et al. 2012)
    - Dene Tha' Traditional Land Use with Respect to BC Hydro's Proposed Site C Dam (Stevenson and Dene Tha' Lands and Environment Department 2012)
    - Fort Nelson First Nation Background and Rationale for Involvement in the Site C Project (Wolfenden 2012)
    - MCFN and ACFN Desktop Knowledge and Use Report for BC Hydro's Proposed Site "C" Dam Project (Candler et al. 2012c)
    - Clarifications to BC Hydro's Review and Response in regard to the Métis Nation BC's "Site C Clean Energy Project" Report (MNBC 2012b)
    - Métis Nation BC "Site C Clean Energy Project" Report (MNBC 2012c)
- Readily available Traditional Land Use and knowledge studies for other projects
- Community Baseline Reports received from First Nations at the time of writing (Volume 3 Appendix B First Nations Community Baseline Reports):
    - Duncan's First Nation. 2012. First Nations Community Baseline Profile: Duncan's First Nation.
    - Treaty 8 First Nations Treaty 8 First Nations (T8FNs) Community Assessment Team and The Firelight Group Research Cooperative. 2012. Telling a Story of

Change the Dane-zaa Way – A Baseline Community Profile of: Doig River First Nations, Halfway River First Nation, Prophet River First Nation and West Moberly First Nations. November 2012

- Ethnohistorical, anthropological, and geographical literature
- Results of BC Hydro consultations with Aboriginal groups
- Results of the Fish and Fish Habitat, Vegetation and Ecological Communities, and Wildlife Resources Effects Assessments (Volume 2 Sections 12, 13, and 14, respectively)

19.2.2 Incorporation of Traditional Use information

As described in Section 9.2.3.3.2 in Volume 1 Section 9 Information Distribution and Consultation, BC Hydro entered into agreements with a total of nine Aboriginal groups to carry out Traditional Land Use Studies (TLUS) for the Project. Following submission of those reports, BC Hydro engaged Traditions Consulting Services to review the completed TLUS reports and related publicly available materials, and to consider where additional information would be beneficial. Traditions Consulting also completed summary reports for those Aboriginal groups that did not complete a TLUS for this Project but may, in some instances, have supplied information in other formats. With the exception of reports by MCFN and ACFN, the TLUS reports and the summary reports completed by Traditions Consulting are included in Volume 5 Appendix A Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests, and Information Requirements Supporting Documentation.

Where First Nations submitted TLUS reports, these were used as the primary source of information for the baseline information presented in Section 19.2.2.

19.2.3 Data Management, Mapping and Modelling

A spatial analysis was undertaken to identify the overlap between the Project activity zone and areas that are currently used by Aboriginal groups for traditional purposes. Resource use was also depicted by Aboriginal groups in tabular form (see Tables 19.5 to 19.10).

Integration of the TLUS data posed a number of challenges. To begin with, the study areas defined in the Project-specific TLUS reports submitted to BC Hydro, and other reports reviewed, do not align precisely with the LAA or RAA. Interpretation of various TLUS and other maps was necessary in an attempt to discern the location of activities in relation to the LAA or RAA. Similarly, the spatial information supplied by Aboriginal groups was frequently buffered, or redacted, for purposes of confidentiality or sensitivity, making it difficult to identify specific locations in relation to the LAA for this VC. It is BC Hydro's understanding that the results of the TLUS are representative of the appropriate land uses in the respective TLUS areas.

19.3 Baseline Conditions

The EIS guidelines identify 29 Aboriginal groups as potentially affected by the Project. This includes First Nations and Métis groups in B.C., Alberta, and the Northwest Territories. This section provides a general overview of current use of lands and resources for traditional purposes within and outside the LAA, based on the sources

considered in the assessment. Current and reasonably anticipated future use of lands and resources for traditional purposes is then discussed in more detail by Aboriginal group.

Hunting, fishing, trapping, gathering plant foods, and pursuing other traditional activities remain culturally and economically important activities for the 29 Aboriginal groups listed in the EIS guidelines. They are all reported to actively pursue hunting, fishing, trapping, and other traditional activities on their traditional territories. Several of the Aboriginal groups have identified a continued reliance on the Peace River for a range of sustenance, cultural, socio-economic, and spiritual purposes. The Peace River valley has been noted as a place of high cultural, historical, and ecological value. It is a place to hunt, fish, trap; a place to gather, to quietly enjoy nature; and a place where traditions and language are passed on to younger generations (General 2011; Candler et al. 2012b)

Actively engaging in traditional activities and maintaining a traditional way of life are essential elements of Aboriginal people's well-being and quality of life. Saulteau First Nations, West Moberly First Nations 2006; Duncan's First Nation 2012; Treaty 8 First Nations and the Firelight Group 2012). The Treaty 8 First Nations Community Profile Report describes country food harvesting as a practice that brings together multiple generations; promotes a connection with the land and physical activity; contributes to a healthier diet than store-bought foods; promotes the use of traditional language and the transfer and retention of knowledge, traditions, and values; creates a sense of pride and self-sufficiency among harvesters; and promotes community relations (Treaty 8 First Nations and the Firelight Group 2012).

Aboriginal groups have indicated that their ability to utilize the lands and resources of the Peace River basin for traditional purposes has been constrained by changes in the overall health of the of the Peace River, and the availability and health of fish, wildlife, and plant resources, which they attribute largely to development activities in the region (e.g., oil and gas, energy, mining, forestry, agriculture, etc.) Other factors identified as restricting Aboriginal people's ability to hunt, fish, and trap include increased distance to harvesting sites and related increased travel costs, increased competition from non-Aboriginal hunters, fishers, and trappers, and a reduced feeling of safety and security on the land (General 2012f; Candler et al. 2012a; Treaty 8 First Nations and the Firelight Group 2012; Nesoo Watchie Resource Management Ltd. 2011).

Future Use

Aboriginal groups have expressed their future use intentions in various ways. Most Aboriginal groups reported that they will continue to use their traditional territories for hunting, fishing, and trapping in the future. Where this was not reported, other indicators of future use were often identified, including the following:

- Expressions of interest in owning and protecting land from future development, including sacred sites (e.g., BRFN's interest in protecting Dancing Grounds and Pink Mountain; Saulteau and West Moberly First Nation's identification of Area of Critical Community Interest)
- Organization of hunting, trapping, and gathering camps, allowing for transfer of language, culture, and knowledge to youth
- Cultural programming (e.g., DRFN culture programs and events)

- Expressions of interest in engaging in watershed restoration and fisheries restoration for the Peace River Basin (e.g., Duncan's First Nation)
- Expressions of concern regarding food security
- Identification of concerns regarding the Project's potential effects on traditional use and the exercise of Aboriginal rights

Information was limited with respect to the intent to continue these activities specifically in the LAA.

Tables 19.5 to 19.10 provide a list of resources for harvested and traditional activities engaged in that have been reported for Aboriginal groups in the LAA.

The list was developed based on TLUS or other reports commissioned by BC Hydro for the Project and conducted by Aboriginal groups, and from the publicly available published and unpublished reports.

Tables 19.5 to 19.10 reflect the reported presence or absence of traditional or current use for those groups that have at least some identified current use, in the LAA, of each resource use or activity listed, regardless of the intensity or frequency of harvesting or activity. Generalized statements or references to traditional or current harvesting, use or activity (e.g., descriptions of hunting, trapping, fishing, or gathering throughout a traditional territory) are not reflected.

The Study Areas defined in the TLUS and other reports reviewed do not align precisely with the LAA, and therefore interpretation of various TLUS and other maps was required to discern whether harvesting or other activities should be deemed as included in the LAA.

The categories of resources and activities in the tables reflect the categories as reported in individual TLUS and other reports; no attempt has been made to standardize terminology.

The tables are subject to the limitations expressed in the TLUS and other reports on which it is based. More specifically, it should not be construed as comprehensive, since not all members of the First Nations or other groups listed were interviewed concerning traditional harvesting or activities, nor have all historic harvesting or activities in the LAA been reported or described.

Table 19.5 Resource Use by Aboriginal Group – Wildlife

Resource: Wildlife	SFN	T8TA	BRFN	DTFN	DFN	HLFN
Large Mammals						
Moose	✓	✓	✓	✓	✓	✓
Elk	✓	✓	✓	✓		
Deer (unspecified)	✓		✓	✓		
Mule Deer	✓	✓				
Whitetail Deer	✓	✓				
Bear (unspecified)		✓		✓		
Black Bear	✓		✓			
Brown Bear	✓					
Bighorn Sheep						
Buffalo		✓				
Caribou	✓					
Grizzly	✓					
Mountain Goat						
Small Mammals						
Beaver	✓	✓		✓		
Coyote	✓	✓				
Fisher	✓					
Fox	✓					
Lynx	✓					
Marten	✓	✓				
Mink	✓					
Muskrat	✓					
Rabbit	✓			✓		
Silver Fox	✓					
Squirrel	✓					
Weasel	✓					
Wolf	✓					
Wolverine	✓					

NOTE:
[a] Previously hunted at specified locations

Table 19.6 Resource Use by Aboriginal Group – Birds

Resource: Birds	SFN	T8TA	BRFN	DTFN	DFN	HLFN
Bald Eagle	✓					
Birds (unspecified)					✓	✓
Black and White Duck	✓					
Black Duck	✓					
Blue Grouse	✓					
Duck (unspecified)	✓		✓	✓		

Resource: Birds	SFN	T8TA	BRFN	DTFN	DFN	HLFN
Golden Eagle	✓					
Geese	✓		✓	✓		
Grebe			✓			
Grouse (chicken)	✓	✓	✓	✓		
Mallard	✓					
Pointed Tail Duck	✓					
Prairie Chicken	✓					
Ptarmigan	✓					
Rough Grouse	✓					
Spruce Grouse	✓					
Waterfowl (general)						

Table 19.7 Resource Use by Aboriginal Group – Fish

Resource: Fish	SFN	T8TA	BRFN	DTFN	DFN	HLFN
Rainbow Trout	✓		✓	✓		
Small Trout	✓					
Bull Trout	✓	✓	✓	✓	✓	
Lake Trout		✓				
Dolly Varden	✓		✓			
Grayling	✓		✓			
Jackfish	✓	✓	✓		✓	✓
Kokanee			✓			
Lingcod			✓			
Pickerel/Walleye		✓	✓		✓	✓
Sucker	✓	✓	✓			
Whitefish		✓	✓			

Table 19.8 Resource Use by Aboriginal Group – Plants

Resource: Plants	SFN	T8TA	BRFN	DTFN	DFN	HLFN
Berries (unspecified)	✓					
Berries or Wild Fruit		✓				
Bearberry (Kinnikinnick)						
Blackberries			✓			
Blueberries			✓			
Bulrush	✓					
Chokecherries			✓			
Cloudberries						

Resource: Plants	SFN	T8TA	BRFN	DTFN	DFN	HLFN
Cow Parsnip						
Cranberries						
Cultural Plants						
Firewood		✓				
Gooseberries						
Hay	✓					
High-bush Cranberries						
Huckleberries				✓		
Labrador Tea	✓		✓			
Low-bush Blueberries			✓			
Lumber	✓					
Medicinal Plants		✓				
Mint			✓			
Native Blackberries			✓			
Peppermint Tea						
Plant (Herb)	✓		✓			
Plants (unspecified)						
Plant/Earth Gathering					✓	✓
Raspberries						
Rat Root	✓					
Rose Hips						
Saskatoon Berries			✓	✓		
Sage		✓				
Shrub						
Soapberries				✓		
Stinging Nettle						
Strawberries						
Trees	✓					
Wild Onion	✓					
Wild Potatoes			✓			

Table 19.9 Resource Use by Aboriginal Group – Other Resources

Resource: Other Resources	SFN	T8TA	BRFN	DTFN	DFN	HLFN
Feathers		✓				
Rocks	✓					
Water Source	✓	✓				

Table 19.10 Resource Use by Aboriginal Group – Cultural Sites

Resource: Cultural Sites	SFN	T8TA	BRFN	DTFN	DFN	HLFN
Burials	✓	✓	✓			
Buffered Site [a]		✓				
Cabins	✓					
Camps	✓		✓			
Ceremonial Flags	✓ [b]					
Cultural Sites					✓	
Day Camps	✓					
Gathering Places		✓				
Overnight Sites					✓	✓
Permanent Habitations		✓				
Place Names	✓	✓				
Teaching Areas						
Temporary Habitations		✓				
Trails	✓					
Transportation Lines		✓				
Water Routes		✓				

NOTES:

[a] Buffered sites include sacred sites, burial sites, spiritual areas, and medicinal plants

[b] Reported to be throughout a trapline, part of which is in LAA

19.3.1.1 Blueberry River First Nations

19.3.1.1.1 Background – Blueberry River First Nations

The Blueberry River First Nations (BRFN) has two reserves covering 1,508.8 ha (Kennedy 2011). As of December 2012, BRFN has a registered population of 469, nearly half of whom reside on Blueberry River Indian Reserve No. 205, located approximately 80 km northwest of Fort St. John (AANDC 2012c). The second reserve is the south half of the Beaton River No. 204 (Treaty 8 Tribal Association 2005-2013a). The North Half of Beaton River No. 204 belongs to the Doig River First Nation (AANDC 2012f).

The BRFN is a Treaty 8 signatory but is not a member of the Treaty 8 Tribal Association (Treaty 8 Tribal Association 2005-2013e).

BRFN members are culturally Beaver (Dane-zaa), part of the Northern Athapaskan language group.

19.3.1.1.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Blueberry River First Nations

Baseline information of current land use presented in this section is based largely on the BRFN Traditional Land Use Study, (BRFN 2011) authored by Bouchard and Kennedy Consultants, commissioned by BC Hydro (Kennedy 2011).

Additional information on current use is derived from ongoing consultation with BC Hydro with respect to the Project.

BRFN traditional territory in British Columbia extends approximately from the area south of Tumbler Ridge in the south, to the area south of the Sikanni Chief River in the north, west to the height of land in the Rocky Mountains, and east to the Alberta border (see Volume 5 Appendix A03 Part 1, Map of Blueberry River First Nations Traditional Territory).

The spatial setting for the BRFN TLUS, called the Study Area, is located south of Blueberry River Indian Reserve No. 205 and represents only a portion of BRFN traditional territory.

The Study Area used in the BRFN TLUS was defined as a 16 km strip roughly centred on the Peace River upstream from Taylor (Kennedy 2011). The area depicted on the accompanying maps, however, is significantly larger, extending to Peace Reach on Williston Reservoir. Most of the Study Area is included within the wildlife resources LAA and fish and fish habitat LAA.

A majority of the 40 BRFN members interviewed for the BRFN TLUS indicated that the vicinity of the Project is a preferred area for pursuing traditional land use activities, due to its relative accessibility and year-round abundance of moose – a key food source for band members. BRFN members reported that they believe that oil and gas activity and industrial logging occurring around the BRFN Reserve negatively impacts the food resources there, forcing them to travel to other regions of their territory (Kennedy 2011).

In Section 8 of the BRFN TLUS Report, current site-specific resource harvesting information has been extracted from the TLUS interviews for 11 culturally significant areas. Ten of these areas are entirely or partly within the wildlife resources LAA, including: the Peace River and Beatton River; Taylor and Old Fort; the Pine River; Bear Flats and Cache Creek; Halfway River and Attachie; Farrell Creek; Hudson's Hope; Moberly River and Del Rio.

These areas are described as having cultural significance to the BRFN (Kennedy 2011). However, many resource harvesting locations mentioned in these excerpts are not depicted on the theme maps or discussed in the Contemporary BRFN TLUS Activities and TEK section in the TLUS Report.

19.3.1.1.3 Current Hunting and Trapping – Blueberry River First Nations

BRFN assert that their ancestors hunted and trapped over a wide area of the Peace River region, both north and south of the Peace River, from the Rocky Mountain foothills in the west to the Clear Hills and Grande Prairie in Alberta in the east (Kennedy 2011).

The BRFN reportedly continue to hunt, fish, trap, camp, and gather resources over a wide area within their traditional territory as part of the continued exercise of their asserted Aboriginal and Treaty 8 rights. BRFN members are likely to pursue hunting, trapping, fishing, gathering, and related traditional activities in the future. The hunting areas identified by Brody (1981), being primarily lying north of Montney between the Blueberry and Beatton Rivers, continue to be used and comprise the most noteworthy hunting and trapping areas for BRFN members today (Weinstein 1979).

Ungulates and Large Animals

BRFN reports active hunting for moose, elk, and deer within both the LAA and outside the LAA (see Volume 5 Appendix A03 Part 5, Blueberry River First Nations Moose Harvesting Map, Elk Harvesting Map and Deer Harvesting Map).

BRFN members describe hunting moose, elk, deer, and bear on both sides of the Peace River. Moose, elk, mountain sheep, and caribou are harvested north of the eastern end of Williston Reservoir. Caribou are also said to be harvested on the east side of Cameron River.

Moose is described as the preferred species for meat. The hide is also tanned and used for making moccasins and other leather work. Approximately 31 moose harvesting areas are identified in the BRFN TLUS. The highest concentration of hunting activity for moose is depicted in the Cache Creek, Halfway River, and Farrell Creek watersheds, on the north side of the Peace River, and between the lower Pine and Moberly Rivers on the south side of the Peace River. There is also a moose harvesting area along the east side of Dunlevy Creek. Most of the moose harvesting areas described fall outside the wildlife resources LAA. Small areas fall within the wildlife resources LAA (see Volume 5, Appendix A03 Part 5, Blueberry River First Nations Moose Harvesting Map).

Approximately 23 elk harvesting areas are depicted in the BRFN TLUS. The highest concentration of elk hunting activity portrayed for elk is similar to that for moose: the Cache Creek, Halfway River, and Farrell Creek watersheds, and the lower Pine and Moberly River watersheds (Kennedy 2011). There is also an elk harvesting area depicted north of Dunlevy Creek. Some private landowners are said to allow BRFN members to hunt elk in their fields along the north side of the Peace River (Kennedy 2011). Most of the harvesting areas fall outside the wildlife resources LAA. Small areas fall within the wildlife resources LAA (see Volume 5 Appendix A03 Part 5, Blueberry River First Nations Elk Harvesting Map).

Deer harvesting is said to occur at fewer locations than moose and elk harvesting, and is concentrated in the Cache Creek and Wilder Creek watersheds. Six deer harvesting areas are depicted on the Deer Harvesting Map (Kennedy 2011) and are located mostly outside the wildlife resources LAA (see Volume 5 Appendix A03 Part 5).

Five mountain sheep harvesting areas are depicted on the Mountain Sheep Harvesting map. Two are located on the east side and north of Dunlevy Creek, two are located on the west side and north of Dunlevy Creek, and one is located west of the Halfway River Reserve. The two hunting areas to the east of Dunlevy Creek are outside the wildlife resources LAA. Three caribou harvesting areas are depicted on the Caribou Harvesting map. All are located outside the wildlife resources LAA (Kennedy 2011).

Three black bear harvesting areas were depicted in the BRFN TLUS: one in the LAA on the north side of the Peace River between Farrell Creek and Halfway River; and two outside the LAA on the south side of the Peace River in the mid-Moberly River and mid-Pine River areas (Kennedy 2011). Bear meat and hide are used, and the fat is highly regarded for its healing properties (see Volume 5, Appendix A03 Part 5, Blueberry River First Nations Bear Harvesting Map).

Wildfowl, Upland Birds, and Other Birds

BRFN members report that they hunt birds, but did not provide a harvesting map depicting the hunting areas. The mouth of Wilder Creek, located in the wildlife resources LAA, is mentioned as a good bird hunting area. Grouse are said to be hunted all over (Kennedy 2011). Bird hunting is described as opportunistic, often occurring while hunting the large ungulates. In Appendix 6 of the TLUS Methodology Report, three types of birds – duck, geese, and grebes – are indicated as being hunted for personal use in the Study Area. Grouse are also noted as "opportunistic harvesting" (Kennedy 2012).

Small Game

BRFN members say they currently hunt small game for food and pelts (Kennedy 2011). No harvesting map and little information is provided in the BRFN TLUS about small game hunting locations within our outside the wildlife resources LAA or outside the LAA. However, in Appendix 6 of the TLUS Methodology Report, it is noted in Schedule C: Categories of Traditional Knowledge, Use and Occupancy as to whether the reported site-specific uses are relevant to the TLUS Study Area. Rabbit ("opportunistic hunting") and beaver (imprecise locations) are listed as being hunted for personal use within the Study Area (Kennedy 2012).

Location and Current Use of Traplines

The southern portion of one registered trapline held by a BRFN member is located within the wildlife resources LAA.

19.3.1.1.4 Current Fishing – Blueberry River First Nations

A variety of fish species are reported to be caught by BRFN members, including the following:

- Dolly varden/Bull trout
- Rainbow trout
- Kokanee
- Jackfish/pike
- Pickerel/walleye
- Suckers
- Whitefish
- Ling cod
- Grayling

Fishing is described as occurring along the Peace River from the Alberta border to eastern Williston Reservoir. The confluences of the tributary rivers and creeks with the Peace River including Beatton River, Halfway River, Cache Creek, and Farrell Creek are described as particularly important. The Peace River from the Peace Canyon Dam to the Alberta border, and the Halfway River to the Halfway River Reserve are within the fish and fish habitat LAA (see Volume 5 Appendix A03 Part 5, Blueberry River First Nations Fish Harvesting Map).

As a result of concerns regarding pollution from industrial and farming activities in other parts of BRFN territory, BRFN members say they rely more on the Halfway River and the mouths of streams flowing into the Peace River for their fish needs (Bouchard and Kennedy Research Consultants 2012a).

19.3.1.1.5 Current Use of Plants, Trees, and Additional Resources – Blueberry River First Nations

BRFN members describe harvesting plants and berries throughout the Peace River valley. Thirteen plant food harvesting areas, most located outside the wildlife resources LAA, with some portions inside the LAA, are depicted on the Plant Food map. Chokecherries, Saskatoon berries and blackberries are noted as being particularly abundant around Bear Flats, which is within the wildlife resources LAA (Kennedy 2011). The banks of the Halfway River are noted as important for harvesting mint and Labrador tea, the area north of Fort St. John and the lower Pine River Valley are described as important for harvesting blueberries, cranberries, Saskatoon berries, strawberries, and raspberries. Butler Ridge is reported as important for high-bush blueberries and huckleberries. Saskatoon berries and chokecherries are said to be abundant around Monias Lake. Plants are used for medicinal purposes, but are noted as “not specific to Study Area” (see Volume 5 Appendix A03 Part 5, Blueberry River First Nations Plant Food Map).

19.3.1.1.6 Trails, Places, and Other Cultural Features – Blueberry River First Nations

BRFN have reported six camp sites within the LAA. Five are reported on the north side of the Peace River: one at Bear Flats, one on the lower Halfway River, two between Halfway River and Farrell Creek, and one on lower Farrell Creek. The sixth camp site is reported on the south side of the Peace River, east of the confluence with the Moberly River. Five camps are depicted as located outside the wildlife resources LAA: one is located northeast of Moberly Lake, two are located on the east side of Dunlevy Creek, two are located south of the Halfway Reserve, and one is located south of the BRFN Reserve. BRFN members are reported to use the camps while hunting, fishing, and recreational camping. An elder/youth culture camp is held at Bear Flats (see Volume 5 Appendix A03 Part 5, Blueberry River First Nations Harvesting Maps).

Information on current spiritual sites is limited in the BRFN TLUS Report. There is a discussion of graves in the Aboriginal Dane-zaa section, in which some current information is included. The area around Attachie is identified as particularly important (Kennedy 2011). One BRFN member talked of the potential for burials throughout the Peace River valley because “that’s where the old-timer Beaver Indians used to be” (Kennedy 2011).

Through consultation with BC Hydro, BRFN representatives indicated that Dancing Grounds is a sacred site, and expressed interest in protecting the land from future development. BRFN also indicated that Red Creek was a common place for members who lived in the city to meet, and emphasized the importance of protecting the lands around Pink Mountain and Muskwa Kechika, both of which are outside the wildlife resources LAA (see Volume 5 Appendix A03, Part 2). Pink Mountain is noted as an important recreational and subsistence hunting area for BRFN. It is considered a prime hunting ground and a favorite area for moose and buffalo (Kennedy 2011: 88). BRFN are reported to fish in the headwaters of the Halfway River (Kennedy 2011: 115). BRFN

Pink Mountain is also used for berry picking, unity gatherings, and culture camps (Kennedy 2011: 117;119; see Volume 5 Appendix A03, Part 2).

19.3.1.2 Saulteau First Nations

Saulteau First Nations (SFN) has one reserve, East Moberly Lake No. 169, located approximately 25 km from the town of Chetwynd, B.C., and 100 km southwest of Fort St. John. The reserve covers 3,025.8 ha (Nesoo Watchie Resource Management Ltd. 2011). As of June 2010, SFN had nearly 1,000 members, with approximately half living on-reserve. Other members live in neighbouring communities, including Chetwynd, Prince George, and Fort St. John, as well as in larger cities, including Vancouver and Kamloops.

19.3.1.2.1 Current and Reasonably Anticipated Future Use of Lands and Resources – Saulteau First Nations

The main source for baseline information was the SFN's Culture and Tradition Study (SFN CTS) undertaken for the Project environmental assessment, with support from BC Hydro (Nesoo Watchie Resource Management Ltd. 2011). SFN members report that they currently hunt, fish, trap, and harvest additional resources in portions of the wildlife resources LAA and outside the LAA as well. They also describe an extant network of trails, cabins, and other features and special sites with portions inside the wildlife resources LAA and in the CTS Project Area outside the LAA as well.

SFN's Project-specific traditional use depicts most of this use as occurring south of the Peace River. SFN hunting grounds (Nesoo Watchie Resource Management Ltd. 2011, Saulteau First Nations Heat Map 83) are distributed throughout the wildlife resources LAA, with concentrations in the areas around the Boucher Lake, and in the areas around Monias Lake. References for hunting ground locations in the CTS Project Area and outside the LAA are generally distributed, with concentrations in the area around the upper Moberly River, around Monias Lake, around Boudreau Lake, in the vicinity of the road leading from Moberly Lake to Boucher Lake, and in the general area of Boucher Lake.

Traplines used by SFN members are shown as distributed through most of the wildlife resources LAA, with concentrations occurring in the areas around Boucher Lake, in the area to the southwest of Monias Lake, on the south side of the Peace River opposite Hudson's Hope, and on the south side of the Peace River upriver from Attachie. The references to trapline locations are also distributed throughout the CTS Project Area outside the wildlife resources LAA, with most locations being portrayed to the south of the Peace River, with concentrations of activity occurring around Moberly Lake, around Big Lake, along the upper Pine River, along the Moberly River, around Boucher Lake, around Monias Lake, and around Boudreau Lake.

The SFN report making concerted efforts to maintain or re-establish their connections with traditional hunting lands. They place economic, social, and cultural importance on their seasonal round and establish hunting, trapping, and gathering camps on hunting lands. These camps are attended by SFN members who engage in traditional activities and are used as a place to teach SFN youth about SFN traditional life, activities, and language, with the aim of having these carried on into the future.

19.3.1.2.2 Current Hunting and Trapping – Saulteau First Nations

SFN members consider hunting and trapping to be the mainstays of traditional SFN community life, and of the traditional economy for local subsistence and commercial purposes (Nesoo Watchie Resource Management Ltd. 2011).

Ungulates and Large Animals

Ungulate species are reported to predominate amongst the large game animals hunted for food by SFN members. Moose is described as the most sought-after species for hunters, followed by elk and deer. Some bear hunting is also described. Most large game hunting is shown as occurring south of the Peace River, and towards the southwestern portions of the wildlife resources LAA and the central portion of the area outside the wildlife resources LAA included in the CTS Project Area.

Moose hunting is reported generally throughout the southwestern portions of the wildlife resources LAA and central portion of the areas outside the LAA included in the CTS Project Area south of the Peace River, with concentrations occurring along the middle and upper watershed of the Moberly River, and in the areas around Monias Lake and the Boucher Lake.

Elk hunting is mapped generally throughout the southwestern portions of the wildlife resources LAA and central portion of the areas outside the LAA included in the CTS Project Area south of the Peace River, with concentrations occurring along the middle and upper watershed of the Moberly River, in the area around Boucher Lake, and the area around Monias Lake, and southward towards Big Lake.

Deer (unspecified) hunting is shown generally throughout the southwestern portions of the wildlife resources LAA and central portion of the areas outside the LAA included in the CTS Project Area south of the Peace River, with concentrations occurring along the middle and upper watershed of the Moberly River, and in the areas around Monias Lake, Boudreau Lake, Boucher Lake, and north of Moberly Lake. Mule deer sites hunting are mapped in the same areas, the area between the lower stretches of the Moberly and Pine River, and the area south of the Taylor below the Peace River. Whitetail deer are depicted as being hunted along the Moberly River, in the area north of Moberly Lake, around Boudreau Lake and on the north side of the Peace River north of Hudson's Hope.

Black bear hunting sites are mapped generally throughout the southwestern portions of the wildlife resources LAA and in the central portion of the areas outside the LAA included in the CTS Project Area south of the Peace River, with some concentrations of activity occurring around Boucher Lake, around Moberly Lake, and in the general area from the Peace River south to the Pine River around Monias Lake and Boudreau Lake.

Grizzly bear hunting is shown as occurring generally throughout much of the central and eastern portions of the wildlife resources LAA and in the central and southwestern portions of the areas outside the LAA included in the CTS Project Area south of the Peace River, with some concentration in an area to the north of Moberly Lake.

Brown bear hunting is shown at a number of sites distributed through the south central portions of the wildlife resources LAA and the areas outside the LAA included in the CTS Project Area. Two sites are located in the wildlife LAA to the south and west of Monias Lake, and another site is located along the central part of the Moberly River.

No mountain goat hunting sites are portrayed within the wildlife resources LAA; several locations are mapped in the CTS Project Area but outside the wildlife resources LAA to the north and west of the west end of Moberly Lake.

Caribou hunting locations are portrayed in the CTS Project Area to the east of Moberly Lake; a part of one location falls within the wildlife resources LAA.

Wildfowl, Upland Birds, and Other Birds

Waterfowl are depicted as being hunted generally, with a few exceptions, along rivers, streams, lakes, and other water bodies in the wildlife resources LAA and outside the wildlife resources LAA in the CTS Project Area south of the Peace River. Ducks (unspecified) are shown as hunted in the wildlife resources LAA in the area around Boucher Lake, along the Moberly River, and around Monias Lake.

Some concentrations of mallard hunting sites are mapped on a portion of the lower Moberly River, around Boucher Lake (within the wildlife resources LAA), at the west end of Moberly Lake, and in the vicinity of Big Lake.

Black and white duck are depicted as being hunted at various locations distributed in the south central portion of the CTS Project Area outside the wildlife resources LAA (Nesoo Watchie Resource Management Ltd. 2011).

Some goose hunting sites are shown as located in the wildlife resources LAA along the Peace River downstream from Hudson's Hope, and in the vicinity of Boucher Lake; other locations outside the wildlife resources LAA in the CTS Project Area occur in the area to the north of Moberly Lake, around Monias Lake, and on the north side of the Peace River around the lower portion of Farrell Creek.

Pointed-tail duck hunting sites are depicted in the wildlife resources LAA at the east end on the south side of the Peace River; other sites are mapped elsewhere outside the wildlife resources LAA in the CTS Project Area in the area to the south and east of the Pine River.

Upland Birds and Other Birds

Grouse (chicken) are hunted primarily in the southern and western portions of the wildlife resources LAA and elsewhere outside the wildlife resources LAA in the CTS Project Area south of the Peace River, with a concentration in the vicinity of Boucher Lake, and in the general vicinity of the portion of the Moberly River north of Monias Lake. Blue Grouse hunting sites are concentrated along the north shore of Moberly Lake. "Prairie chicken" hunting sites occur generally through the central portion of the CTS Project Area outside the wildlife resources LAA to the south of the Peace River, with some concentrations around the upper Moberly River, around the Boucher Lake, in the area between the lower Pine and Moberly Rivers, distributed in the general area around Boudreau Lake, and on the north side of the upper Pine River.

Ptarmigan hunting occurs generally in portions of the southwestern end of the CTS Project Area south of the Peace River, with some area falling inside the wildlife resources LAA, and with some hunting also occurring in the area around Monias Lake. Most rough Grouse hunting occurs in the south central and western portions of the CTS Project Area south of the Peace River, with some activity falling inside the wildlife resources LAA.

Spruce Grouse are hunted in the wildlife resources LAA in the area south of Monias Lake and generally in to the southwestern portions of the wildlife resources LAA.

Bald Eagles, or eagle feathers (Nesoo Watchie Resource Management Ltd. 2011), are harvested at three locations in the wildlife resources LAA. One Bald Eagle resource area is shown on the south side of the Peace River between the mouths of the Pine and Moberly Rivers; Golden Eagle resource sites in the LAA are shown to the southwest of Monias Lake, along Highway 29 to the south of the Peace River and distributed along the north shore of the Peace River. Elsewhere in the CTS Project Area, but outside the wildlife resources LAA, a Bald Eagle resource site is shown to the west of Highway 29 and south of the Peace River, and four Golden Eagle sites are distributed along Highway 29 between the Peace River and Moberly Lake; several more are shown along or near the Moberly River and Boucher Lake; several also occur in the vicinity of Monias Lake; and one site is shown to the northeast of Windy Creek.

Small Game

SFN members report hunting or trapping a wide variety of small game and fur-bearing animals in the wildlife resources LAA, including, in descending order of number references to sites recorded during SFN CTS interviews: rabbit, beaver, wolf, lynx, marten, squirrel, muskrat, weasel, coyote, fisher, mink, wolverine, and fox. Most harvesting of these animals in the wildlife resources LAA is shown as occurring south of the Peace River, and in the south central portion of the wildlife resources LAA, the south central portion of the CTS Project Area outside the wildlife resources LAA. See (Volume 5 Appendix A23 Part 5, Saulteau First Nations Heat Map 101) for a distribution of trapline sites. The quantities of trapping sites referenced suggest that trapping is a commercial activity for some SFN members.

Rabbit are shown as harvested generally in the western parts of the wildlife resources LAA, with concentrations of activity occurring in the vicinity of Monias Lake, and in the area to the south of Boucher Lake. They are reported to be harvested elsewhere in the CTS Project Area outside the Wildlife Resource LAA along the Moberly River in the vicinity of Boudreau Lake and Monias Lake, in the area around Boucher Lake, to the north of Moberly Lake, and in the area around Big Lake.

Beaver are shown as harvested throughout much of southwestern parts of the wildlife resources LAA and the CTS Project Area outside the wildlife resources LAA, with concentrations along the Moberly River, the southern Pine River, and around the Boucher Lake.

Marten are shown as harvested generally throughout of the southwestern parts of the wildlife resources LAA and the CTS Project Area outside the wildlife resources LAA, with most activity concentrated along the Moberly River, in the vicinity of Boucher Lake, and in the areas around Moberly Lake and Le Bleu Creek.

Wolf are shown as harvested generally throughout most of the south central parts of the wildlife resources LAA and the CTS Project Area outside the wildlife resources LAA, with concentrations along the Moberly River, around Boucher Lake, and in the area around Boudreau Lake.

Lynx are shown as harvested generally throughout most of the south parts of the wildlife resources LAA and the CTS Project Area outside the wildlife resources LAA, with concentrations along the Moberly River, the southern Pine River, around Boucher Lake, and along Medicine Woman Creek.

Squirrel are shown as harvested generally throughout the south and central parts of the wildlife resources LAA and the CTS Project Area outside the wildlife resources LAA, with most activity concentrated along the eastern part of the Moberly River, the southern part of the Pine River, around Boucher Lake, and around Moberly Lake.

Muskrat are shown as harvested generally throughout the southwestern parts of the wildlife resources LAA and the CTS Project Area outside the wildlife resources LAA, with activity concentrated along the western part of the Moberly River, along the south Pine River, and around Moberly Lake, Boucher Lake, Jackfish Lake, and Big Lake.

Weasel are shown as harvested generally throughout the southwestern parts of the wildlife resources LAA and the CTS Project Area outside the wildlife resources LAA, with activity concentrated in the areas around Boucher Lake, Boudreau Lake, Monias Lake, and around Moberly Lake.

Coyote are shown as harvested generally throughout the southwestern parts of the wildlife resources LAA and the CTS Project Area outside the wildlife resources LAA, with most activity concentrated in the areas around Boucher Lake, Boudreau Lake, Monias Lake, and along the Moberly River.

Fisher are shown as harvested generally throughout the southwestern parts of the wildlife resources LAA and the CTS Project Area outside the wildlife resources LAA, with most activity concentrated along the Moberly River, in an area around Boucher Lake, and in the area north of Moberly Lake.

Mink are shown as harvested generally throughout most of the southern parts of the wildlife resources LAA and the CTS Project Area outside the wildlife resources LAA, with most activity concentrated along the Moberly River, and in the areas around Boucher Lake, Boudreau Lake, and north of Moberly Lake.

Wolverine are shown as harvested generally throughout most of the central and southern parts of the wildlife resources LAA and the CTS Project Area outside the wildlife resources LAA, with most activity concentrated along the upper Moberly River, in the areas around and north of Boucher Lake, north of Moberly Lake, and around Big Lake.

Fox harvesting activity in the wildlife resources LAA and the CTS Project Area outside the wildlife resources LAA is shown as concentrated in the areas around Boudreau Lake, Monias Lake, and Boucher Lake. One reference to a silver fox harvesting site is located in the western part of the wildlife resources LAA. They are shown as harvested elsewhere through the western and southern part of the CTS Project Area outside the wildlife resources LAA.

Location and Current Use of Traplines

A number of traplines were registered to SFN people, and several SFN members hold and operate trapline licenses today (BC Hydro 2012a; 2012b; Chatten et al. 2012). Portions of the wildlife resources LAA lie within the boundaries of six traplines held by SFN members (BC Hydro 2012a); all are located on the south side of the Peace River. Interviews conducted with 5 licence holders for these traplines provides complementary information to that provided in the SFN CTS concerning hunting and trapping in the wildlife resources LAA and outside the LAA (Chatten et al. 2012).

1) TR0731T007 is located to the southwest of Hudson's Hope. The trapline is described as being used generally for hunting, trapping, and other purposes. Marten, fisher,

mink, and beaver (castor is used for medicine) are reported to be trapped, and wolves and coyotes snared. Trapping is shown as occurring in the northeastern part of the trapline in the wildlife resources LAA along the Peace River.

2) TR0732T002 is located to the north of Moberly Lake and includes the area around Boucher Lake; the northwest end of the trapline extends to the Peace River and includes part of the wildlife resources LAA. The proposed transmission line portion of the wildlife resources LAA also traverses the trapline. The trapline is described as being used two to three months of the year by all members of the trapline owner's family. They report hunting or trapping (with traps) all available fur-bearers and other animals and birds, including beaver, otter, geese, ducks, marten, fisher, rabbits, lynx, coyote, wolverine, squirrels, weasels, mink, and wolverine. Most activity is reported to occur around lakes and wetland areas and in moose wintering areas.

3) TR0732T004 is located on the south side of the Peace River opposite the mouths of Cache Creek and the Halfway River, and extends south towards the Moberly River, and includes the area around Boudreau Lake. It includes a part of the wildlife resources LAA on the south side of the Peace River. The trapline is reported to be worked by one member of the family that owns the trapline; marten, otter, beaver, fisher, coyote, wolf, and other fur-bearers are trapped, with wolves and marten being the main target species.

4) TR0732T005 includes the general areas around lower Moberly River and Pine River. The trapline includes portions of the wildlife resources LAA. The trapline is registered and used by the owner, but it was stated that it will start to be used as a family trapline. The key species described as being trapped are marten, fisher, and lynx; but mink, squirrels, beaver, muskrat, and wolf are also reportedly trapped. The area around Septimus to the Peace River is the described as the most successful area for trapping.

5) TR0732T006 is located between the Pine and Moberly Rivers, from the vicinity of Big Lake in the south, to the area of the mouth of Windy Creek to the northeast, with a portion extending on the eastern side of the Pine River. The trapline is inside the Wildlife RAA and is traversed by a portion of the wildlife resources LAA where there are many beaver ponds. The trapline is described as being currently operated by one individual, with marten, fisher, wolf, beaver, muskrat, and bears being the species harvested with traps and snares; the entire trapline is generally trapped.

6) TR0732T007, located to the west of the Pine River and east of Halfmoon Lake, from Big Lake in the north to East Pine in the south, includes a part of the wildlife resources LAA. No interview was conducted with the trapline licence holder, a SFN member.

Portions of traplines TR0731T010 and TR0722T005, with licences held by SFN members, are included outside the wildlife resources LAA.

Project effects on tenured traplines are assessed in Volume 3 Section 24 Harvest of Fish and Wildlife Resources.

19.3.1.2.3 Current Fishing – Saulteau First Nations

Fishing is described as having played an important role in the SFN traditional annual round of economic and cultural pursuits, and continues to be pursued today (Weinstein 1979).

Fishing is reported to occur in the fish and fish habitat LAA primarily in the Peace River and in the Moberly River, but also elsewhere in other streams and water bodies, most located south of the Peace River. SFN members report fishing for the following species in the fish and fish habitat LAA, in descending order of number of references to sites during interviews: rainbow trout, Dolly Varden, trout (unspecified), jackfish, grayling, bull trout, sucker and small trout.

At a meeting with BC Hydro on October 1, 2012, SFN representatives indicated that whitefish and walleye are also species of interest, as well as burbot and lake trout, the latter two being caught at Moberly Lake (see Volume 5 Appendix A23, Part 2).

SFN advised that Carbon Inlet was important to SFN. SFN indicated that access to key fishing sites was a concern and cautioned that certain mitigation measures, such as fish restocking, had not worked in Moberly Lake, where lake trout were lost.

Rainbow trout are described as being caught generally throughout of the southwestern parts of the fish and fish habitat LAA in the CTS Project Area, with concentrations of activity in the Peace River and Moberly River. Trout (unspecified) are said to be caught generally throughout of the southwestern parts of the fish and fish habitat LAA in the CTS Project Area, with some concentration of activity in the Moberly River. Bull trout are reported to be caught in the fish and fish habitat LAA in the Peace River in the CTS Project Area, and, to a lesser extent, along the Moberly River. Small trout are described as being caught in the in the western part of the fish and fish habitat LAA in the CTS Project Area.

The SFN CTS reports dolly varden being caught generally throughout the southwestern parts of the fish and fish habitat LAA in the CTS Project Area, with concentrations of activity in the Peace River and, to a lesser extent, in the Moberly River.

At a meeting on November 22, 2012, SFN advised BC Hydro that during bull trout runs, SFN members camp at the Halfway River, catch a substantial amount of fish, and eat them throughout the year.

Jackfish are reportedly caught generally throughout the southwestern parts of the fish and fish habitat LAA and the CTS Project Area outside the fish and fish habitat LAA, with most activity concentrated in Moberly River, Moberly Lake, Cameron Lakes, and Boucher Lake.

Grayling are described as being caught generally throughout the central and southern parts of the fish and fish habitat LAA and the CTS Project Area outside the fish and fish habitat RAA, with some concentration of activity in the Moberly River, and the area around and north of Moberly Lake.

Suckers are reportedly caught in the fish and fish habitat LAA in the Peace River, and, to a lesser extent, along the Moberly River; and in the CTS Project Area outside the fish and fish habitat RAA in Moberly Lake, the Moberly River and the Pine River.

19.3.1.2.4 Current Use of Plants, Trees, and Additional Resources – Saulteau First Nations

SFN members report harvesting several types of plant and tree resources in the wildlife resources LAA and in the CTS Project Area outside the wildlife resources LAA, mostly south of the Peace River. These include (in descending order of frequency): berries, trees (wood), plants (herb), Labrador tea, rat root, bulrush, wild onion, hay, and lumber.

There is little specific information presented in the CTS concerning the traditional uses of the resources harvested.

Berries are described as being collected generally in the wildlife resources LAA, with a concentration of activity in the area to the south of Boucher Lake. Berries are also said to be collected in the CTS Project Area outside the wildlife resources LAA, with concentrations of harvesting occurring along the shores of Moberly Lake, in the upper Moberly River watershed, in the area around Boucher Lake, and in the general area of Moberly Lake.

Trees are referenced as being harvested in the wildlife resources LAA along the north shore of the Peace River between Attachie and the Peace Canyon Dam, in the general area of Boucher Lake, and near Windy Creek. They are also reported as harvested elsewhere in the CTS Project Area outside the wildlife resources LAA in an area extending northward from Moberly Lake and including Boucher Lake, elsewhere around Moberly Lake, in the middle portion of the Moberly River watershed, and in the general vicinity of Big Lake.

Plants (herbs) are reported as harvested in the wildlife resources LAA in the area to the south of Boucher Lake and in the area around Monias Lake. They are also referenced as harvested in the CTS Project Area outside the wildlife resources LAA in the general area around Boucher Lake, around Monias Lake, along the shores of Moberly Lake, around Cameron Lakes, and around Big Lake.

Labrador tea is described as being harvested in the wildlife resources LAA along the Peace River (in the western part of the LAA) and in the areas around Boucher Lake, the Moberly River, Monias Lake, and Attachie. It is also reported as harvested in the CTS Project Area outside the wildlife resources LAA in the middle part of the Moberly River watershed, in a portion of the watershed of the Pine River, around Big Lake, around Moberly Lake, around Cameron Lakes, in an area that extends from the north shore of Moberly Lake to Boucher Lake, and in an area north and west of Attachie.

Rat root is shown as harvested in the wildlife resources LAA in the area around Boucher Lake, and in the CTS Project Area outside the wildlife resources LAA in the same general area. Rat root appears to be used by many SFN members (Chan et al. 2011).

Bullrush is mapped as harvested generally in the western parts of the wildlife resources LAA, and in the CTS Project Area outside the wildlife resources LAA, at locations at the east end of Moberly Lake, around Big Lake, and in the vicinity of the confluence of Farrell Creek and Alder Creek.

Wild onion is shown as harvested generally in the central portions of the wildlife resources LAA and the CTS Project Area outside the wildlife resources LAA with concentrations of activity in the vicinity of the confluence of Farrell Creek and Alder Creek, and at a location to the northeast of Moberly Lake.

Lumber is mapped as obtained in the wildlife resources LAA at one site around Monias Lake and another to the west of that location. It is also obtained north and west of Moberly Lake.

Hay is shown as harvested in the wildlife resources LAA at one location near Boucher Lake, and in the CTS Project Area outside the wildlife resources LAA on the north side of Moberly Lake.

19.3.1.2.5 Trails, Places, and Other Cultural Features – Saulteau First Nations

The SFN CTS interviews also obtained information about various "location types" that might be adversely impacted by the project within the LAA in the CTS Project Area outside the LAA. The location types include several that relate to traditional SFN activities, including those listed below (Nesoo Watchie Resource Management Ltd. 2011):

- **Cabins:** There are 11 references to cabins located in the LAA to the south and east of Boucher Lake. Elsewhere in the CTS Project Area outside the LAA, references to cabins are located in the area around or at Big Lake and Graveyard Creek, and on or near the Moberly River south of Boudreau Lake.
- **Camps:** There are 79 references in the SFN CTS to camps located within the LAA. Many references are to camps located along the south side of the Moberly River near the mouth, on the north side of the Pine River near the mouth, near Monias Lake, and through the eastern end of the proposed transmission line right-of-way. Other camp locations are shown on the north side of the Peace River to the southwest and northeast of Attachie, and on the south side of the Peace River opposite Attachie. In the CTS Project Area outside the LAA, references to camp locations are spread along the north side of the Peace River from Williston Reservoir to an area to the west of Attachie, near the north and south sides of the Moberly River, to the east of Boudreau Lake, to the area north of Monias Lake, and in the vicinity of Highway 97 near Foss and Groundbirch, and of 275 Road north of Groundbirch.
- **Day Camps:** There are six references to day camps in the LAA, located south of Boucher Lake, near Monias Lake, along both sides of the Peace River between Dinosaur Lake and Attachie, and at the east end of Williston Reservoir. In the CTS Project Area outside the LAA, there are references to other day camps located in the area around a bridge over the Moberly River, in the area around Boucher Lake, on the north shore of Moberly Lake, on the Moberly River northeast of Moberly Lake, and around Big Lake.
- **Trails:** There are 22 references to trails in the LAA, located in the area to the south of Boucher Lake, to the south and west of Monias Lake, near the mouth of the Moberly River, and at a pair of locations on the south side of the Peace River. In the CTS Project Area outside the wildlife resources LAA, concentrations of trail locations are shown along the north side of Moberly Lake, to the north of Cameron Lakes, and along a route leading from Boucher Lake to the vicinity of Boudreau Lake, and then proceeding to join the Moberly River. Other routes are shown extending as a network through much of the eastern portion of the RAA to the south of the Peace River.
- **Burial Grounds:** There is one reference to the location of a burial ground area, spread over a large area located in the LAA in the general vicinity of Hudson's Hope. Other references to burial grounds are portrayed in the CTS Project Area outside the wildlife resources LAA in the area around Moberly Lake, in the vicinity of Graveyard Creek, along a route from Moberly Lake to Big Lake, and around a lake to the northwest of Monias Lake.

In general, the CTS describes that every summer SFN members establish hunting, trapping, and gathering camps where community members stay. It is also reported that while engaging in traditional activities, SFN youth learn about SFN language, culture,

and how to process meat, berries, and medicines; these camps maintain cultural links to the past (Nesoo Watchie Resource Management Ltd. 2011).

19.3.1.3 Treaty 8 Tribal Association

19.3.1.3.1 Background – Treaty 8 Tribal Association

The Treaty 8 Tribal Association (T8TA) traditional use study represents Doig River First Nation, Halfway River First Nation, Prophet River First Nation, and West Moberly First Nations.

Doig River First Nation (DRFN) has two reserves, Doig River No. 206 and Beatton River No. 204 (North Half), with a combined area of 1358.1 ha (AANDC 2012f). The main community is located on Doig River No. 206, about 30 km northeast of Fort St. John (MARR 2012). Facilities in the community include a cultural and administrative centre, a learning centre, a convenience store, and a daycare (in progress) (Treaty 8 Tribal Association 2005-2013). The cultural and administrative centre is a large complex that, in addition to being used by DRFN members, offers public exhibitions, and programs and events so that adjoining communities and tourists can learn about and participate in DRFN culture (Ministry of Canadian Heritage 2012).

In December 2012, DRFN had a registered population of 293, with 126 members living on-reserve. DRFN has a Chief and two Councillors, and is a Section 11 *Indian Act* band (AANDC 2012f). According to DRFN:

> "Today, our people are living in a hybrid world that integrates non-Aboriginal culture and economy with our Dane-zaa traditional knowledge and hunting culture. We are engaged in a range of business ventures and cultural activities that are focused on strengthening our economic base, improving the health of our community, and maintaining Dane-zaa traditions and language (Virtual Museum Canada 2012)."

DRFN is a member of the T8TA and the Council of BC Treaty 8 Chiefs (Treaty 8 Tribal Association 2005-2013).

Prophet River First Nation (PRFN), also known as Dene Tsaa First Nation, has one reserve, Prophet River No. 4, with an area of 373.9 ha. The reserve is located approximately 100 km south of Fort Nelson on Highway 97.

PRFN's total registered population as of December 2012 is 260 with an on-reserve population of 103. PRFN has a Chief and two councilors, and uses a custom electoral system (AANDC 2012m). PRFN is a member of the T8TA and the Council of BC Treaty 8 Chiefs (Treaty 8 Tribal Association 2005-2013).

West Moberly First Nations (WMFN) has one reserve, situated on 2033.6 ha of land at the west end of Moberly Lake (West Moberly Lake No. 168A) (AANDC 2012s). The reserve is located roughly halfway between Hudson's Hope and Chetwynd, B.C., about 90 km southwest of Fort St. John, B.C. (B.C. Court of Appeal 2011).

As of December 2012, WMFN has a registered population of 258, including 103 members living on-reserve. WMFN has a Chief and four Councillors and uses a custom electoral system (AANDC 2012s). WMFN is a member of the T8TA and the Council of BC Treaty 8 Chiefs (Treaty 8 Tribal Association 2005-2013).

Halfway River First Nation (HRFN) has one reserve, Halfway River No. 168, with an area of 3988.8 ha (AANDC 2012i). HRFN's main community is located on the north bank of the Halfway River, about 100 km northwest of Fort St. John (MARR 2012).

As of December 2012, HRFN had a registered population of 256, with 145 members living on-reserve. HRFN has a Chief and two Councillors, and uses the *Indian Act* electoral system (AANDC 2012i). HRFN is a member of the T8TA and the Council of BC Treaty 8 Chiefs (Treaty 8 Tribal Association 2005-2013).

19.3.1.3.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Treaty 8 Tribal Association

Information on current T8TA use of lands and resources was derived primarily from the traditional land use study undertaken for BC Hydro by the T8TA, a letter from T8TA responding to questions regarding the TLUS (Candler et al. 2012b; Treaty 8 Tribal Association, Tribal Chief 2012 pers. comm.) and the Treaty 8 First Nations Community Profile Report, which encompasses DRFN, HRFN, PRFN and WMFN (Treaty 8 First Nations Community Assessment Team and the Firelight Group Research Cooperative 2012). In addition, a range of publicly available published and unpublished studies was reviewed for information on traditional land and resource use by T8TA members.

The TLUS Local Study Area (LSA), which was the area of focus in the interviews, covers a larger area than the wildlife resources LAA. The TLUS LSA encompasses the footprint of the Project with a 5 km buffer, whereas the wildlife resources LAA includes the footprint with a 1 km buffer. The TLUS LSA is totally within the Wildlife Resources and fish and fish habitat RAAs.

Subsistence use values or harvesting locations located outside of the TLUS LSA are depicted on the Comprehensive Study Results map (Candler et al. 2012, Treaty 8 Tribal Association Traditional Land Use Map 9). This map includes sections of the wildlife resources LAA not in the TLUS LSA and all of the area of the wildlife resources RAA.

Treaty 8 First Nations members describe the Peace River valley, especially the area between Hudson's Hope and Taylor, as a "critical, essential and irreplaceable part of the cultural landscape". Current T8TA use values recorded for the TLUS are concentrated along the north side of the Peace River at the confluences with tributaries. Many of the confluence areas are stated to be heavily used ancestral gathering places (Candler et al. 2012b).

WMFN has described the Peace River Sub-Basin as their preferred Treaty territory (WMFN Land Use Department 2012). Currently, WMFN report preferential harvesting areas west of Moberly Lake, up Johnson Creek Road and South Moberly Road, and has identified an area close to the West Moberly reserve, as an Area of Critical Community Interest (ACCI). It has also identified an area of particularly significant concern within the ACCI, known as the Peace-Moberly Tract. The Peace-Moberly Tract comprises approximately 1,090 km^2 of land lying between Moberly Lake and the Peace River. The northern boundary of the Peace-Moberly Tract follows the Peace River between Dinosaur Lake and Peace Boudreau Park, while the southern boundary follows the Moberly River watershed both upstream and downstream from Moberly Lake. Most of the WMFN reserve lands lie within the Peace-Moberly Tract (ILMB 2006).

In a 2010 report for the Halfway River First Nation, the north side of Peace Reach is noted as an area currently preferred by the Halfway River First Nation to exercise their

treaty and Aboriginal rights, as extensive industrial activity in other areas within the Peace Region has constrained their ability to exercise their rights in those areas (HRFN Lands Department 2010).

HRFN members report areas of current highest use and value by include: around the Halfway Reserve down the Halfway River to Attachie, Crying Girl Prairie, Chowade River, Farrell Creek between Hudson's Hope and the upper Halfway River, Christina Falls, and the Graham River watershed (Treaty 8 First Nations Community Assessment Team and the Firelight Group Research Cooperative 2012).

The PRFN primary traditional use area is reported as located north of the Sikanni Chief River and Pink Mountain. PRFN members say they have close connections to the people of Halfway River, and continue to travel to the Peace River valley for harvesting and annual gatherings held at Attachie and Bear Flats (Treaty 8 First Nations Community Assessment Team and the Firelight Group Research Cooperative 2012).

In the Treaty 8 First Nation Community Baseline Report (Treaty 8 First Nations Community Assessment Team and the Firelight Group Research Cooperative 2012), the preferred areas identified as currently used by DRFN members are north of the Reserve to Fontas River; near the Doig and Beatton Rivers, and toward and across the Alberta border, including Boundary Lake and Ole Lake. These areas are reportedly now used more than the Peace River region. Land alienation is stated as the primary factor for the loss of use of the Peace River area (Treaty 8 First Nations Community Assessment Team and the Firelight Group Research Cooperative 2012).

19.3.1.3.3 Current Hunting and Trapping – Treaty 8 Tribal Association

Subsistence use values or harvesting locations, including for hunting and fishing, in the TLUS LSA are depicted on the Subsistence Use Study Results Maps (Candler et al. 2012b, Maps W5, E5, 9). The confluences of tributary rivers/creeks with the Peace River along the north shore are described in the TLUS Report as the preferred fishing and/or hunting areas. Bear Flats and Cache Creek, Farrell Creek, Halfway River, Lynx Creek, and Hudson's Hope are noted as being of particular importance (see Volume 5 Appendix A06 Part 5, Appendix 2)

Ungulates and Large Animals

The western portion of the TLUS LSA, encompassing the area from the eastern end of Williston Reservoir to Portage Creek, is depicted as an important area for subsistence use values for elk, white-tailed deer, and moose (see Volume 5 Appendix A06 Part 5, Map W5). This area corresponds with the ungulate habitats (primarily elk) depicted on Environmental Map W-3. One hunting ground, located west of Hudson's Hope on lower Portage Creek, is depicted on the Subsistence Use Study Results Maps (see Volume 5 Appendix A06 Part 5, Map W3).

In order of frequency, the species shown as harvested include: moose (16), white-tailed deer (7), mule deer (6), and elk (6). Small concentrations of ungulates are depicted at Bull Flats, Bear Flats, and east of Taylor. One bear was also depicted at Bear Flats. Outside the wildlife resources LAA, but within the TLUS LSA, there are an additional 95 ungulates depicted on the Subsistence Use Study Results and Comprehensive Study Results maps.

Thirty-five subsistence use values for ungulates depicted on the Subsistence Use Study Results and Comprehensive Study Results Maps are located within the wildlife LAA

(Candler et al. 2012b, Maps W5, E5, 9). In order of frequency, the species harvested are shown to include: moose (49), elk (28), white-tailed deer (12), mule deer (3), caribou (1), mountain sheep (1), and bison (1). Concentrations of ungulates are located between Bullhead and Portage mountains (mixed), at Farrell Creek (moose), near Carey Creek (elk), at the west end of Moberly Lake (mixed), and south of Taylor (mixed). There also two bear depicted outside the wildlife resources LAA, but within the TLUS LSA.

Subsistence areas and subsistence lines are another feature depicted on the Study Results and Comprehensive Study Results maps (Candler et al. 2012b, Maps W5, E5, 9). The terms are not defined. No information is provided as to what is being harvested at these locations. Many of the areas are depicted as linear. Six of the subsistence areas follow whole or in part a “limited use road” on the base map.

Fourteen subsistence areas depicted on the maps are located within the wildlife resources LAA. Thirteen of the subsistence areas/lines are located on the north side of the Peace River: three west of Fort St. John Park, two east of Wilder Creek, one at the confluence with the Halfway River, one on the lower Halfway River, two between Halfway River and Farrell Creek, two west of Farrell Creek, one at Coffee Pot, and one at Bull Flats. The other subsistence area is depicted on the south side of the Peace River west of Boucher Lake.

Outside the wildlife resources LAA, but within the TLUS LSA, 26 additional subsistence areas/lines are depicted on the Subsistence Use Study Results and Comprehensive Study Results maps: three south of Boucher Lake, one east of Boucher Lake, three south of Coffee Pot, one at Carbon Lake, four at West Moberly Lake, seven between the east end of Williston Reservoir and Portage Creek, one east of mid-Brenot Creek, one at the mouth of Dunlevy Creek, one on the Graham River, two in the area of Halfway River Reserve 168, and two northeast of the Halfway River Reserve.

Traditional Ecological Knowledge

Three environmental use values are depicted on the Environmental Maps: environmental areas, environmental features, and environmental corridors. The majority of these values are recorded along the north side of the Peace River in the LSA. Environmental use values depicted and labelled include: moose, elk, deer, and bear habitats; eagle, duck, goose, beaver, and fish habitats; river crossings for moose, deer, elk, bear, and horses; and sightings of moose, elk, deer, and grizzly bear. There are also a number of calving areas labelled on the islands in the Peace River. Two natural water springs are identified southwest of Bear Flats. Three horse habitats are depicted around the lower Moberly River. A buffalo jump with buffalo remains is depicted east of Bear Flats (see Volume 5 Appendix A06 Part 5, Maps W5, E5).

Wildfowl, Upland Birds, and Other Birds

Four subsistence use values for birds, one Grouse, and three ‘chickens’ depicted on the Subsistence Use Study Results and Comprehensive Study Results maps are located within the wildlife resources LAA. The three “chicken” symbols are located at Bear Flats. A number of habitats for eagles, ducks, and geese are depicted along the Peace River on the Environmental Study Results maps.

Outside the wildlife resources LAA, but within the TLUS LSA, there are an additional 19 birds depicted on the Subsistence Use Study Results and Comprehensive Study Results maps. In order of frequency, the species shown include: 10 "chickens",

six Grouse, two geese, and one duck (see Volume 5 Appendix A06 Part 5, Maps W5, E5, 9).

Small Game

Four subsistence use values for small mammals, one marten and three beaver, depicted on the Subsistence Use Study Results and Comprehensive Study Results maps, are within the wildlife resources LAA (see Volume 5 Appendix A06 Part 5, Maps W5, E5, 9). The marten symbol is located in the mid-Maurice Creek area, one beaver symbol is located north of Bear Flats, one is located on the Peace River west of Bear Flats, and one is located on the lower Pine River (see Volume 5 Appendix A06 Part 5, Maps W5, E5). Outside the wildlife resources LAA, but within the TLUS LSA, there are an additional 10 small mammals depicted on the Subsistence Use Study Results and Comprehensive Study Results maps. In order of frequency, the species shown include: three beavers, three coyotes, two rabbits, one marten, and one other fur-bearer.

Location and Current Use of Traplines

As there are few depictions of small fur-bearers, either commercial trapping figures were excluded from the TLUS or trapping is currently not being broadly pursued. No registered traplines held by T8TA members are located within the area of the wildlife resources LAA on the 1980 trapline map by Brody or the 2012 trapline map by BC Hydro (Brody 1981, Map 5; BC Hydro 2012a).

No DRFN traplines were identified within the wildlife resources LAA.

In 2000, the WMFN identified three traplines held by the community. However, none are within the wildlife resources LAA.

19.3.1.3.4 Current Fishing – Treaty 8 Tribal Association

Approximately 109 values depicted for fish on the Subsistence Use Study Results and Comprehensive Study Results maps are within the fish and fish habitat LAA: whitefish (10), jackfish (7), bull trout (6), lake trout (5), pickerel or walleye (3), sucker (1), and other fish (77) (see Volume 5 Appendix A06 Part 5, Maps W5, E5, 9). Fish symbols are concentrated at confluences along the Peace River at Portage Creek, Lynx Creek, Halfway River, east of Taylor, and at the mouth of the Beatton River. There is also a small concentration on the Halfway River near Halfway River Reserve 168 (see Volume 5 Appendix A06 Part 5, Map 9). Five fish habitat areas on the Peace River depicted on the Environmental Maps are located within the wildlife resources LAA (see Volume 5 Appendix A06 Part 5, Maps W3, E3).

19.3.1.3.5 Current Use of Plants, Trees, and Additional Resources – Treaty 8 Tribal Association

The south-facing slopes of the Peace River valley are identified with cultural use values for collecting sage and unidentified rare medicinal plants. Medicinal plants are buffered data on the Cultural Use Study Results maps and cannot be identified. There is, however, one medicinal plant habitat area depicted on the north shore of the Peace River opposite the confluence with the Moberly River on Environmental Study Results Map E3.

Thirteen berry or wild fruit use values depicted on the Subsistence Use Study Results and Comprehensive Study Results maps are located within the wildlife resources LAA.

Most are located along the Peace River. Two firewood locations are depicted at Bear Flats and another two locations between Farrell Creek and Halfway River. Outside the wildlife resources LAA, but within the TLUS LSA, there are an additional 13 berry or wild fruit use values depicted. There is a small concentration of berry or wild fruit symbols west of the Halfway River Reserve 168, and at the west end of Moberly Lake. The other berry or wild fruit use values are scattered over the TLUS LSA but outside the wildlife resources LAA.

Four firewood locations are depicted outside of the wildlife LAA.

Two natural water springs are identified southwest of Bear Flats. Four drinking water source locations are depicted on the Subsistence Use Study Results maps within the wildlife resources LAA, one at the south side of the Peace River at the mouth of Moberly Creek, one west of Bear Flats, and two at Hudson's Hope (see Volume 5 Appendix A06 Part 5, Maps W5, E5).

19.3.1.3.6 Trails, Places, and Other Cultural Features – Treaty 8 Tribal Association

There are 136 habitation use values depicted on the Habitation Use Study Results and Comprehensive Study Results maps that are within the wildlife resources LAA: 59 gathering places, 53 temporary habitations, and 24 permanent habitations. There are concentrations of habitation use values shown along the north shore of the Peace River at Farrell Creek, Lynx Creek, Halfway River, Bear Flats and Cache Creek, and on both sides of the river at Hudson's Hope. There are smaller concentrations shown on the north shore of the Peace River opposite Moberly River, at Fort St. John Historic Park, and at Taylor.

Outside the wildlife resources LAA, but within the TLUS LSA, there are an additional 57 habitation use values depicted on the Habitation Use Study Results and Comprehensive Study Results maps: 26 temporary, 26 permanent, four gathering places, and one habitation area. There are small concentrations of habitation symbols at the west end of the Moberly Lake, on Highway 29 north of West Moberly Reserve 168A, on the Beatton River west of the Doig River Reserve 206, and west of the Halfway River Reserve 168.

In the TLUS Report, the author stated that 30 transportation values were within the Project footprint and flood zone, including: portions of trails, horse crossings, raft or boat crossings, and water routes by canoe and motorboat (Candler et al. 2012b). Two transportation use values, transportation lines and water routes, are depicted on the Transportation Study Results maps (see Volume 5 Appendix A06 Part 5, Maps W6, E6). Outside the wildlife resources LAA, but within the TLUS LSA, there are at least four water routes extending along the Peace River from Hudson's Hope eastwards to the confluence with the Beatton River. There are four transportation lines along the Halfway River, of which the lower sections are within the wildlife resources LAA; three roughly follow the river from the mouth to Halfway River Reserve 168, and one extends from the mouth of the river along the height of land on the west side to Halfway River Reserve 168. There are five shorter transportation lines depicted in the area of the Peace River including: two on the south side of the Peace River near the mouth of the Moberly River; one on the lower Pine River; one east of Bear Flats; and one along the west side of lower Farrell Creek.

Outside the wildlife resources LAA, but within the TLUS LSA, there are four additional transportation lines: two in the area south and west of Bull Flats, one west of mid-Maurice Creek; and one that extends down Dunlevy Creek across Williston Reservoir and south to West Moberly Lake (see Volume 5 Appendix A06 Part 5, Maps W6, 9).

T8TA describe the Peace River valley as a cultural landscape with many place names and associated histories reflecting Dunne-za (Beaver) ties to the land. Within the wildlife resources LAA, there are 76 cultural use values depicted on the Cultural Use Study Results map and the Comprehensive Results map: buffered data areas (44), place names (12), teaching areas (9), cultural areas (3), heritage resources (3), feathers (2), cultural lines (2), and cultural plants (1) (see Volume 5 Appendix A06 Part 5, Maps W2, E2, 9).

The cultural use areas are shown concentrated along the banks of the Peace River, with a higher concentration at stream confluences on the north shore. Bear Flats and Attachie at the mouth of the Halfway River are depicted as having the greatest concentration of cultural use values (Candler et al. 2012a; WMFN Traditional land Use and Occupancy Study Team 2000). One feathers location corresponds to the location of eagle nests depicted on Environmental Study Results map W-3 (Candler et al. 2012b).

Burials associated with the 1919 flu epidemic are reported to be in the Peace River valley at Attachie. The grave of Chief Attachie is reported to be on the south-facing slope at Attachie. The valley bottom downstream of Bear Flats is another area reported to be a burial location. Multiple burials are also reported to be at Halfway River (Candler et al. 2012b; WMFN Traditional land Use and Occupancy Study Team 2000).

Outside the wildlife resources LAA, but within the TLUS LSA, there are an additional 27 cultural use values depicted on the Cultural Use Study Results and Comprehensive Study Results maps: buffered data areas (9), place names (6), cultural lines (5), teaching areas (4), heritage resources (1), feathers (1), and cultural plants (1). The locations of the cultural use values are widely dispersed, including at Carbon Lake, East and West Moberly Lake, Rene Lake, Stewart Lake, Butler Ridge, upper Farrell Creek, and mid- and lower Kobes Creek (see Volume 5 Appendix A06 Part 5, Map 9).

19.3.1.4 McLeod Lake Indian Band

19.3.1.4.1 Background – McLeod Lake Indian Band

The McLeod Lake Indian Band (MLIB) has 21 reserves with a combined area of more than 20,000 ha. The main community is located on Indian Reserves No. 1 and No. 5, located on opposite banks at the north end of McLeod Lake, about 150 km of Prince George (BC Treaty Commission 2003, Statement of Intent, McLeod Lake Indian Band Territory Map).

In 2010, the band had 491 registered members (MARR 2012). MLIB has a Chief and six Councillors (two on-reserve, two off-reserve, an elder Councillor and a youth Councillor) (MLIB 2012).

19.3.1.4.2 Current and Reasonably Anticipated Future Use of Lands and Resources – McLeod Lake Indian Band

Information on MLIB current and future use of lands and resources was derived from a limited number of publicly available published and unpublished studies.

The traditional territory of the MLIB, as described on the MLIB website (see Volume 5, Appendix A15, Part 1, McLeod Lake Indian Band Traditional Territory Map), is an area of approximately 108,000 km^2 (MLIB 2012). A portion of the MLIB traditional territory depicted on the south side of the Peace River includes portions of the wildlife resources LAA that are on the south side of the Peace River as well.

The MLIB state they have used the lands and resources throughout their asserted traditional territory for traditional purposes including hunting, fishing, and gathering in the past and currently, and they anticipate doing so into the future.

19.3.1.4.3 Hunting and Trapping – McLeod Lake Indian Band

MLIB indicated to BC Hydro that the following species are of high importance to MLIB members: caribou, grizzly bear, wolverine, moose, elk, groundhogs or marmot, Grouse, deer, black bear, fisher, grayling, and bull trout (see Volume 5 Appendix A15, Part 2).

An Aboriginal Traditional Knowledge report prepared for the MLIB indicates that MLIB members currently hunt a range of species, including the following:

- Large mammals: moose, elk, deer, bear
- Small game: marmot, beaver, and rabbit
- Birds: Grouse, ptarmigan, geese, and ducks

Species reportedly trapped include beaver, squirrel, marten, mink, fisher, otter, lynx, wolves, coyote, and fox (FMA Heritage Inc. 2010).

No specific information was identified that described or documented current or reasonably anticipated future use by MLIB members of lands and resources within the Current Use of Lands and Resources LAA for hunting, fishing, or trapping activities. MLIB is undertaking a traditional use study for the Project. The results of the study will be considered and incorporated into the EIS, where appropriate, during the EIS review phase.

19.3.1.4.4 Current Use of Plants, Trees, and Additional Resources – McLeod Lake Indian Band

MLIB members are reported to pick blueberries, soapberries, huckleberries, low-bush and high-bush cranberries, Saskatoon berries, strawberries, raspberries, chokecherries, currants, and gooseberries. The berries are either put in jars or frozen (FMA Heritage Inc. 2010).

Plants, including Labrador tea, mint tea, devil's club, strawberries, juniper, violet, fireweed, red willow, jack pine, balsam, pine bark, and pine sap, are described as harvested for medicinal purposes, primarily from wetlands (FMA Heritage Inc. 2010). Other plants said to be of importance to MLIB are lodgepole pine, wild rhubarb, stinging nettle, fireweed, and cow parsnip (see Volume 5 Appendix A15, Part 2).

19.3.1.4.5 Trails, Places, and Other Cultural Features – McLeod Lake Indian Band

MLIB report that members have cabins and camping areas, located throughout their traditional territory, that are used when undertaking traditional activities, particularly trapping and hunting.

No specific information was identified that described or documented current use by MLIB members of lands and resources within the LAA for other traditional activities.

19.3.1.5 Duncan's First Nation

19.3.1.5.1 Background – Duncan's First Nation

The Duncan's First Nation (DFN) main community is on Duncan's Indian Reserve 151A, located on the north side of the Peace River near Brownvale, Alberta. DFN has a second Reserve, William McKenzie, located southeast of the town of Peace River. As of December 2012, DFN has a registered population of 269, with 142 members living off-reserve. DFN has a Chief and two Councillors, and uses a custom electoral system (AANDC 2012g).

19.3.1.5.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Duncan's First Nation

The information on DFN current use of lands and resources presented here is drawn from the Traditional Land Use Study (TLUS) undertaken by DFN with respect to the Project (General 2011, 2012a, 2012b, 2012f). DFN traditional territory is defined as the TLUS Area (see Volume 5 Appendix A07 Part 1, Duncan's First Nation Traditional Territory Map).

The DFN TLUS reports that members of the DFN have utilized in the past, and currently continue to utilize, the land and resources within northwestern Alberta and northeastern British Columbia for a range of traditional activities including sustenance, commercial, spiritual, and other cultural purposes.

DFN has expressed concern that industrial development in the Peace Region has limited and altered DFN members hunting, fishing, and gathering practices. Community members are reported to need to travel away from their usual places to engage in their traditional activities, and as far as 50 km to 300 km away from the community to hunt moose (General 2012f).

DFN will likely continue to pursue these activities in the future.

19.3.1.5.3 Current Hunting and Trapping – Duncan's First Nation

Ungulates and Large Animals

The DFN TLUS reports that moose is the most heavily hunted mammal by DFN members. Seventeen moose kill sites are identified as follows:

- Two moose kill sites within the wildlife resources LAA: one near Hudson's Hope and one near Taylor
- Moose kill sites outside the wildlife resources LAA including:

- Three on the north side of the Peace River in the area of Farrell Creek and the lower Halfway River
- Five northeast of Fort St. John
- Three north of Moberly Lake
- Two east of Dawson Creek
- One in the area of the mid-Kiskatinaw River
- One in the area of the mid-Pine River (General 2011)

The DFN TLUS identified deer kill sites outside the wildlife resources LAA, including one east of Fort St. John (see Volume 5 Appendix A07 Part 5, Duncan's First Nation Deer Kills Category Map; General 2012b) and two elk kill sites in the area east of Moberly Lake (see Volume 5 Appendix A07 Part 5, Duncan's First Nation Deer Kills Category Map; General 2012b). Other mammals noted as being hunted are bear (38 kill sites) and other ungulate (12 kill sites) (General 2012b). No information is presented in the TLUS on locations of harvest of the latter two categories.

In a meeting with BC Hydro on February 3, 2011, DFN members reported that they hunt less at the Peace River than in the past. DFN representatives indicated that members "could no longer hunt along the shores of the Peace River because of agricultural development and private property, and due to muddy conditions of the river banks" (see Volume 5 Appendix A07, Part 2).

Waterfowl, Upland Birds and Other Birds

The DFN TLUS did not identify bird kill sites within the wildlife resources LAA. The report identified bird kill sites outside the wildlife resources LAA, including two northeast of Fort St. John, and one on the south side of the Peace River near the Alberta border (see Volume 5 Appendix A07 Part 5, Duncan's First Nation Bird Kills Hodgepodge Thematic Map).

Small Game

The DFN Community Baseline Report indicates that, from time to time, DFN members hunt, snare, and trap fur-bearers, including marten, wolverine, otter, beaver, and fox. Trapping locations were not identified (General 2012f).

Location and Current Use of Traplines

Based on the results of the Harvest of Fish and Wildlife Resources section (Volume 3 Section 24), there are no registered traplines held by DFN members in the wildlife resources LAA. The DFN is planning a trapping training program and intends to purchase one to three traplines to support the transfer of trapping skills in the community (General 2012f).

19.3.1.5.4 Current Fishing – Duncan's First Nation

Of the 363 fish kill/catch sites identified in the DFN TLUS, ten are depicted in the fish and fish habitat LAA, as follows:

- One walleye on the Peace River east of Hudson's Hope
- One bull trout on the south shore of the Peace River opposite Farrell Creek

- One walleye on the Peace River at the British Columbia-Alberta border
- Two jackfish at the Peace/Moberly confluence
- Two jackfish east of Taylor

353 fish kill/catch sites are depicted outside the fish and fish habitat LAA, including sites in the Peace River with a concentration in the area of the Peace River Wildlands (see Volume 5 Appendix A07 Part 5, Duncan's First Nation Fish Kills Thematic Map).

DFN members reportedly fish less in the Peace River than in the past. In a meeting with BC Hydro on February 3, 2011, a DFN representative indicated that DFN members were "ceasing to fish in the Peace River or were fishing on a limited basis because the fish did not taste as good and some believed the flesh of the fish was dirty" (see Volume 5 Appendix A07, Part 2).

The DFN Community Baseline Report indicates that community members would fish more if there were more fish, and healthier fish, in the rivers. The DFN is interested in engaging in watershed restoration projects, fisheries management, and fisheries restoration for the Peace River Basin.

DFN representatives pointed out, in a meeting with BC Hydro on May 22, 2012, that the DFN TLUS indicated heavy use of the Peace River by DFN members, who also reported a lot of fishing in the Fort St. John area along the Peace River. DFN advised that fluctuation of water levels impacts fishing quality, ability to fish, and absence of wildlife in backwater areas (see Volume 5 Appendix A07, Part 2).

19.3.1.5.5 Current Use of Plants, Trees, and Additional Resources – Duncan's First Nation

The DFN Harvest Study Report indicates that DFN members harvest the following berries: Saskatoon berries, wild raspberries, blueberries, wild strawberries, chokecherries, and high- and low-bush cranberries (General 2012b). The Harvest Study Report does not provide information on harvesting locations.

Two plant and earth gathering sites identified in the DFN TLUS are shown as located within the wildlife resources LAA, one east of Halfway River and one on the lower Pine River. Eleven plant and earth gathering areas are shown outside the wildlife resources LAA: eight are located on the lower Beatton River east of Fort St. John; three are located on the south side of the Peace River; one is in the area of Moberly Lake, one opposite Halfway River; and one is on the lower Kiskatinaw River.

19.3.1.5.6 Trails, Places, and Other Cultural Features – Duncan's First Nation

The DFN TLUS map depicts 16 overnight sites that are likely connected with resource harvesting activities (see Volume 5 Appendix A07 Part 5, Duncan's First Nation Overnight Sites Thematic Map). Five of these sites are located in the wildlife resources LAA as follows:

- One on the south shore of the Peace River opposite Farrell Creek
- Two in the area of Taylor
- Two opposite the mouth of Beatton River

Overnight sites are also depicted on the DFN TLUS map outside the wildlife resources LAA, including five east of Fort St. John and six on the south side of the Peace River.

Three cultural sites are depicted on the TLUS map. Two of these sites are located in the wildlife resources LAA: one near the mouth of Farrell Creek, and one on the Peace River south of Fort St. John. The third site is located outside the wildlife resources LAA and northeast of Fort St. John. The nature of the sites was not identified in the TLUS (see Volume 5 Appendix A07 Part 5, Duncan's First Nation Cultural Sites Thematic Map).

19.3.1.6 Horse Lake First Nation

19.3.1.6.1 Background – Horse Lake First Nation

The Horse Lake First Nation (HLFN) has two reserves with a total area of 3,099.1 ha. The Clear Hills IR 152C Reserve is located 56 km northwest of Fairview, Alberta (150 km north of Grande Prairie) and the Horse Lake IR 152B Reserve is located 60 km northwest of Grande Prairie, Alberta (AANDC 2012j).

As of December 2012, HLFN has a total registered population of 1,045 people, with 571 members living off-reserve. HLFN has a Chief and four Councillors, and uses a custom electoral system (AANDC 2012j).

HLFN is a member of the Western Cree Tribal Council along with DFN and Sturgeon Lake Cree Nation (Western Cree Tribal Council 2012). HLFN is also a member of the Treaty 8 First Nations of Alberta (Treaty 8 First Nations of Alberta 2012).

19.3.1.6.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Horse Lake First Nation

The information on current HLFN use of lands and resources presented in this section is derived from the traditional land use survey undertaken for the HLFN by Matthew General and funded by BC Hydro (General 2012c, 2012d, 2012e).

The HLFN Traditional Land Use Study Area is the traditional territory of the HLFN (see Volume 5 Appendix A07 Part 5, Horse Lake First Nation Traditional Territory Map). The HLFN TLUS Methodology report confirms that community members have and continue to utilize lands and resources in northwestern Alberta, northeastern British Columbia, and the historic Treaty 8 area for a range of cultural, sustenance, socio-economic, spiritual, commercial, and other purposes (General 2012e).

The Upper Halfway River, Sikanni River, and Pink Mountain areas were not included in the Study, although the TLUS author states that a significant number of HLFN members reported ongoing use of these areas. HLFN Community members expressed concern over the potential effects of the Project on wildlife, specifically moose that calve on Peace River islands (see Volume 5 Appendix A11, Part 2).

HLFN community members have noted that it is increasingly difficult to successfully hunt, fish, trap, and gather earth and plant materials within northwestern Alberta and northeastern British Columbia, due to development in the region (General 2012e).

19.3.1.6.3 Current Hunting and Trapping – Horse Lake First Nation

The TLUS maps depict limited hunting in the Peace River region of British Columbia. The HLFN TLUS indicates that moose is by far the most heavily hunted ungulate

(General 2012c, Traditional Land Use Study Maps). In total, 1,642 moose kill sites were recorded (General 2012e, Horse Lake First Nation Moose Kills Category Map). The area south and east of Dawson Creek is the main area of depicted kill sites. There are only two moose kill sites depicted within the wildlife resources LAA: one is located at Hudson's Hope and one at Taylor. Many moose kill sites are also shown at sites outside the wildlife resources LAA, including:

- Two on the north side of the Peace River – one west of the Halfway River Reserve and one east of Fort St. John
- Sixteen on the south side of the Peace River – seven around Moberly Lake, one west of Chetwynd, two north of Pine Le Moray Provincial Park, two in the area of Highway 97/2 Kiskatinaw River crossing, one north of Dawson Creek, and at least three south of Dawson Creek between the highway and the Alberta border

Of the 274 elk kill sites identified in the HLFN TLUS, two are shown within the wildlife resources LAA: one at Taylor and one north of Moberly Lake. Elk kill sites are located outside the wildlife resources LAA, and include two located north of Chetwynd, and two located around Moberly Lake (see Volume 5 Appendix A07 Part 5, Horse Lake First Nation Elk Kills Sites Category Map).

Of the 102 deer kill sites identified in the HLFN TLUS, one is located within the wildlife resources LAA on the south side of the Peace River south of Hudson's Hope. All others are outside the wildlife resources LAA, and include one depicted east of Dawson Creek, three depicted southeast of Dawson Creek near the Alberta border, one depicted at West Moberly, one depicted at the southeast end of Charlie Lake, and two depicted west of Charlie Lake. (General 2012d; see Volume 5 Appendix A07 Part 5, Horse Lake First Nation Deer Kill Sites Category Map).

There is no location information presented on the 72 bear and other mammals kill sites. Of the 455 bird kill sites identified, one unidentified bird kill site is located in the area of Highway 97/Kiskatinaw, outside the LAA (General 2012d; see Volume 5 Appendix A07 Part 5, Horse Lake First Nation Bird Kill Sites Thematic Map).

19.3.1.6.4 Fishing – Horse Lake First Nation

The TLUS maps depict limited fishing in the Peace River region of British Columbia. Four of the 859 fish kill sites identified in the HLFN TLUS are located within the fish and fish habitat LAA in British Columbia including: one walleye and one jackfish on the Peace River at Hudson's Hope, one jackfish on the lower Pine River, and one jackfish on the Peace River at the B.C/Alberta border (see Volume 5 Appendix A07 Part 5, Horse Lake First Nation Walleye Fish Kills Category Map, Jackfish/Northern Pike Category Map).

In the fish and fish habitat LAA, on the Peace River in Alberta, there is a concentration of fish kill sites at Many Islands and to the west. Outside the fish and fish habitat LAA, the concentration of fish kill sites continues along the Peace River east of Many Islands (see Volume 5 Appendix A07 Part 5, Horse Lake First Nation Fish Kills Thematic Map).

19.3.1.6.5 Current Use of Plants, Trees, and Additional Resources – Horse Lake First Nation

The HLFN Country Harvest Study indicates that HLFN members currently consume a variety of berries. From highest to lowest frequency of use, these are reported to include:

wild blueberry, Saskatoon berry, wild raspberry, huckleberry, wild strawberry, low- and high-bush cranberry, gooseberry, and loganberry (General 2012d).

19.3.1.6.6 Trails, Places, and Other Cultural Features – Horse Lake First Nation

Two HLFN cultural sites are depicted within the wildlife resources RAA, southeast of Dawson Creek near the Alberta border. No further information is provided on the two sites (General 2012e).

The Overnight Sites Thematic Map shows three sites located in the wildlife resources LAA in the area of Taylor/Fort St. John. Other overnight sites are depicted outside the wildlife resources LAA, some of these include

- Two at the south end of Charlie Lake and 15 south of the Peace River
- Two north of Pine Le Moray Provincial Park
- One in the area of Carbon Lake, one south of the Peace River Canyon
- Eight in the area of Moberly Lake
- One in the area of the mid-Kiskatinaw River/Highway 97 crossing
- Two southeast of Dawson Creek (see Volume 5 Appendix A07 Part 5, Overnight Sites Thematic Map)

Thirty-three plant and earth gathering sites are depicted on the Plant & Earth Gathering Sites Thematic Map including:

- Five in the wildlife resources LAA, three around Taylor/ Fort St. John, and two along the Peace River near the Alberta border
- Other plant and earth gathering sites are shown outside of the wildlife resources LAA, including: four north of Pine Le Moray Provincial Park, two along the highway between Pine Le Moray Provincial Park and Chetwynd, one on Carbon Creek, three on the southeast side of Williston Reservoir, one at the east end of Williston Reservoir, two south of the Peace River canyon, two on the Moberly River east of Moberly Lake, five around Moberly Lake, two in the area of Boucher Lake, two west of Chetwynd, one in the area of the mid-Kiskatinaw River/Highway 97 crossing, and three southeast of Dawson Creek. (see Volume 5 Appendix A07 Part 5, Horse Lake First Nation Plan and Earth Gathering Sites Thematic Map)

No information was provided in the TLUS as to species or materials gathered at the above locations (General 2012e).

19.3.1.7 Dene Tha' First Nation

19.3.1.7.1 Background – Dene Tha' First Nation

The Dene Tha' First Nation (DTFN) are divided into three Reserve communities in Northwest Alberta: Bushe River, Meander River, and Chateh (formerly Assumption) (Dene Tha' 2012). DTFN has seven reserves near High Level and Bistcho Lake totalling 30,038 ha (AANDC 2012d).

As of December 2012, DTFN has a total registered population of 2,868, with 1,961 people living on-reserve (AANDC 2012d). DTFN is a member of the North Peace Tribal Council (NPTC), incorporated in 1987.

19.3.1.7.2 Current Use of Lands and Resources by Members of the Dene Tha' First Nation

The primary source of information used to draw current traditional use baseline information was the Dene Tha' Traditional Land Use with Respect to BC Hydro's Proposed Site C Dam, Northeastern British Columbia (Stevenson and DTFN Lands and Environment Department 2012), which was undertaken with support from BC Hydro.

The Peace River forms the southern boundary of DTFN traditional territory, where it is within the current use of lands and resources for traditional purposes LAA.

The General Study Area for the DTFN TLUS is defined as the lower fifth of DTFN traditional territory, located south of the Notikiwen River and extending to the Peace River (DTFN, Acting Manager, DTFN Lands and Environment Department, 2012 pers. comm.). Within this area, the DTFN report hunting from Deadwood, Alberta, to Cecil Lake, British Columbia, including the region of the Clear Hills, Alberta. This area is referred to in the TLUS as the Sulphur Lake-Boundary Lake hunting corridor (Stevenson and DTFN Lands and Environment Department 2012).

The Specific Study Area for the TLUS is an area located on the north side of the Peace River that extends approximately 30 km north and then east from the Halfway River in B.C. to the Peace River in Alberta north of Silver Hills (see Volume 5 Appendix A04 Part 5, Study Area Map 1).

Peace River from Halfway River to the Alberta border is within the wildlife resources LAA.

The eastern portions of the LAA are on the western edge of the DTFN Sulphur Lake-Boundary Lake hunting corridor, and are reported to be actively used by DTFN members for hunting of ungulates, particularly moose. In the fall, geese and ducks are reportedly hunted west of Boundary Lake outside the wildlife resources LAA RAA. Berries are described as harvested in the summer along the Peace River in the LAA around Flatrock Creek and downstream.

The Sulphur Lake-Boundary Lake hunting corridor is described as an important resource harvesting area for a number of DTFN members and is likely to remain so in the future. Many of the people report making multiple trips during a year to this area to acquire their food. Some of the people interviewed in the DTFN TLUS say they have used the area for approximately 30 years.

19.3.1.7.3 Current Hunting and Trapping – Dene Tha' First Nation

Ungulates and Large Animals

The DTFN TLUS reports that moose and other game are hunted by the DTFN year round throughout their traditional territory. Moose is the described as the most important animal and is used for food, and the hide for making moccasins (Stevenson, and DTFN Lands and Environment Department 2012). Other game is reported as taken often incidental to the moose hunt, including elk, deer, rabbits, "chickens" (Grouse), geese, and ducks.

DTFN report some moose hunting by boat along the Peace River both upstream and downstream from Fort St. John, within the wildlife resources LAA. Moose hunting is also depicted in the wildlife resources LAA on the south side of the Peace River east from the mouth of the Moberly River to the Alberta border. There is also moose hunting in the areas on either side of the Alaska Highway corridor; only the southern part of this corridor is within the wildlife LAA (Stevenson and DTFN Lands and Environment Department 2012)

Wildfowl, Upland Birds, and Other Birds

In the fall, DTFN members report they hunt geese and ducks in the area around and west of Boundary Lake, British Columbia, which lies outside the wildlife resources LAA. No bird hunting was reported in the LAA (Stevenson and DTFN Lands and Environment Department 2012).

Small Game

In the spring, DTFN members report limited beaver hunting in the area around Boundary Lake outside the wildlife resources LAA. No small game hunting was reported in the LAA (Stevenson and DTFN Lands and Environment Department 2012).

Location and Current Use of Traplines

There are no tenured traplines held by DTFN members in the wildlife resources LAA.

19.3.1.7.4 Current Fishing – Dene Tha' First Nation

The DTFN TLUS describes fishing on the Peace River east of Manning, Alberta, an area outside the fish and fish habitat LAA (Stevenson, and DTFN Lands and Environment Department 2012).

19.3.1.7.5 Current Use of Plants, Trees, and Additional Resources – Dene Tha' First Nation

In the wildlife resources LAA, berries (huckleberries and Saskatoon berries) are reportedly harvested in the summer along the Peace River, particularly around Flatrock Creek and downstream (Stevenson, and DTFN Lands and Environment Department 2012).

19.3.1.7.6 Trails, Places, and Other Cultural Features – Dene Tha' First Nation

The DFN TLUS maps depict hunting camps around Boundary Lake in Alberta, outside of the wildlife resources LAA (see Volume 5 Appendix A04 Part 5, Map 7).

19.3.1.8 Fort Nelson First Nation

19.3.1.8.1 Background – Fort Nelson First Nation

The Fort Nelson First Nation (FNFN) is a Dene/Cree community composed of 14 major families from six main villages: Old Fort (Tthek'eneh Kue), Fontas, Kahntah, Snake River (Nadudhi Deeze), Nelson Forks (Tlidli), and Francois (Tli Gohtche). The FNFN has four reserves totalling 9,752.6 ha (AANDC 2012h). 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 2012).

As of December 2012, FNFN has a registered population of 875 people, including 415 members living on-reserve. FNFN has a Chief and five Councillors, and uses the *Indian Act* electoral system (AANDC 2012h).

19.3.1.8.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Fort Nelson First Nation

Baseline information on FNFN current and reasonably anticipated future use of lands and resources was derived primarily from the letter sent from the FNFN Lands Department to BC Hydro in August 2012 (Wolfenden 2012). A limited number of publicly available published and unpublished reports were also consulted (Honigmann 1946; Asch 1981; Brody 1981; FNFN 2011, 2012a, 2012b; FNFN Lands Department 2012).

FNFN traditional territory encompasses the northeast corner of British Columbia (FNFN Lands and Resources Department 2012), an area that lies outside the boundaries of the wildlife resources LAA.

FNFN asserts that members have practiced their traditional lifestyle of hunting, trapping, harvesting, and fishing throughout their territory in the past, continue to do so today, and will do so into the future. FNFN reports that most FNFN families currently “make at least some part of their living off the land and harvesting in all seasons and across a wide cultural landscape” (Wolfenden 2012).

FNFN reports that members rely heavily on moose, caribou, elk, beaver, rabbit, fish, and other animals as a means of sustenance. They use lakes, creeks, and rivers as the main transportation to access hunting, trapping, and fishing sites within the Treaty 8 Territory (Wolfenden 2012). Goldeye was identified as a culturally important fish species (see Volume 5 Appendix A09, Part 2).

FNFN states that their members exercise their Aboriginal and Treaty 8 rights outside their traditional territory; however, no information was identified that described or documented FNFN current use of lands and resources for traditional purposes within the current use of lands and resources for traditional purposes LAA. Consultation is ongoing between BC Hydro and FNFN, and may yet yield information on the current and reasonably anticipated future use of lands and resources within the LAA. Should FNFN provide information to BC Hydro, it will be considered and incorporated in the EIS during the EIS review phase.

19.3.1.9 Athabasca Chipewyan First Nation

19.3.1.9.1 Background – Athabasca Chipewyan First Nation

The Athabascan Chipewyan First Nation (ACFN) has eight reserves with a combined area of 34,767 ha (AANDC 2012a). The reserves are located near the southwestern tip of Lake Athabasca, across the lake from Fort Chipewyan, and on the Athabasca River (Athabasca Tribal Council 2009-2012a). Fort Chipewyan is ACFN’s administrative base.

As of July 2012, ACFN has a registered population of 1,041, approximately one-third of which lives in the main community at Fort Chipewyan. The population is widely dispersed, with the majority of members living in Fort McMurray and other areas to the south of ACFN’s reserves (Candler and the Firelight Group Research Cooperative 2011).

ACFN has a Chief and four Councillors, and follows a custom electoral system. ACFN is a member of the Athabasca Tribal Council (with Mikisew Cree First Nation, Chipewyan Prairie First Nation, Fort McKay First Nation, and Fort McMurray No. 468 First Nation) (Athabasca Tribal Council 2012b).

19.3.1.9.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Athabasca Chipewyan First Nation

Baseline information on current, past, and future use of lands and resources by the ACFN was derived from publicly available published and unpublished studies. The ACFN and Mikisew Cree First Nation submitted a joint Desktop Knowledge and Use Report for BC Hydro's Proposed Site "C" Dam Project (Candler et al. 2012c). The Study Area for the Desktop Report was the section of the Peace River from the western edge of Wood Buffalo National Park to the junction of the Peace and Slave rivers in the east.

ACFN traditional lands are located in the northeast corner of Alberta and the northwest corner of Saskatchewan, centred around Lake Claire, the western end of Lake Athabasca and the lower Athabasca River (see Volume 5 Appendix A01 Part 3, TLUS Map 112). The core area where ACFN members currently exercise their treaty rights is located within identified ACFN traditional lands (see Volume 5 Appendix A01 Part 3, Core Area of ACFN Traditional Lands Map)

Traditional use and ethnohistorical studies undertaken for or by the ACFN indicate that the ACFN have used the lands and resources throughout their asserted traditional lands for traditional purposes including hunting, fishing, and gathering in the past, continue to do so today, and anticipate doing so into the future.

The ACFN reportedly hunt a range of animals, including the following:

- Large mammals including moose, caribou, bison, and black bear
- Small mammals, including snowshoe hare and porcupine
- Upland birds, including various species of Grouse and ptarmigan
- Waterfowl including various species of geese, and ducks.

ACFN members are reported to trap a variety of fur-bearers for pelts, and beaver and muskrat are also used for food (McCormack 2012).

ACFN members reportedly also harvest fish including lake whitefish, lake trout, northern pike (jackfish), goldeye, and walleye.

ACFN uses of the lower Peace River and the Peace-Athabasca Delta region in their traditional territory, including for water-based navigation, fishing, harvesting of aquatic and riparian plants, harvest of aquatic fur mammals, hunting of migratory birds, and hunting of other species such as moose that rely upon delta ecosystems, are described as relying upon the flow of the Peace River and seasonal high water, especially in spring (Candler et al. 2012c).

The traditional lands of the ACFN are distant from the current use of lands and resources for traditional purposes LAA. No information was identified that described or documented current use by the ACFN of lands and resources within wildlife resources and fish and fish habitat LAAs for hunting, fishing, trapping activities, or other traditional activities.

19.3.1.10 Beaver First Nation

19.3.1.10.1 Background – Beaver First Nation

In December 2012, the registered population of Beaver First Nation (BFN) was 995, of whom over 400 live on one of their two reserves. The two reserves, Boyer 164 and Child Lake 164A, are located northwest of Fort Vermillion in Alberta (Natural Resources Canada 2009, Map Depicting Beaver First Nation Indian Reserves). BFN has a Chief and four Councillors (Alberta MAR 2010b), and uses the *Indian Act* electoral system (AANDC 2012b). BFN is a member of the North Peace Tribal Council and a member of the Treaty 8 First Nations of Alberta (Treaty 8 First Nations of Alberta 2012). BFN is currently in Treaty Land Entitlement negotiations with Canada and Alberta (Alberta MAR 2010a).

19.3.1.10.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Beaver First Nation

Baseline information on past, current, and future use of lands and resources by the BFN was derived through online research. BC Hydro did not enter into a TLUS agreement with BFN, and no traditional land use information was made available by BFN for consideration in this review.

In a meeting with BC Hydro on June 9, 2011, BFN representatives advised that BFN members hunt (moose and deer), trap, and fish, including ice fishing. BFN did not identify the location of the activities or confirm whether they were within the wildlife resources or fish and fish habitat LAAs (see Volume 5 Appendix A02, Part 2).

The current use of lands and resources for traditional purposes LAA is distant from the traditional lands of the BFN. No specific information was identified that described or documented current or reasonably anticipated future use by the BFN of lands and resources within the LAA for hunting, fishing, trapping, or other traditional activities.

Consultation is ongoing between BC Hydro and BFN, and may yet yield information on the current and reasonably anticipated future use of lands and resources within the LAA. Should BFN provide information to BC Hydro, it will be considered and incorporated in the EIS during the EIS review phase.

19.3.1.11 Deninu K'ue First Nation

19.3.1.11.1 Background – Deninu K'ue First Nation

Deninu K'ue (DKFN), which means "moose island", is a settlement corporation at Deninu K'ue (Fort Resolution), Northwest Territories, southwest of the Slave River Delta on the south shore of Great Slave Lake (Akaitcho Treaty 8 Tribal Corporation 2012).

As of December 2012, the DKFN had a total registered population of 878 people, with one member living on DKFN's own reserve and 439 on their own Crown land. DKFN uses a custom electoral system (AANDC 2012e).

19.3.1.11.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Deninu K'ue First Nation

Baseline information on the past, current, and future use of lands and resources by DKFN was obtained from online research. At the time of writing, BC Hydro had not

entered into a TLUS agreement with DKFN, and no traditional land use information was made available by DKFN for consideration in this review. DKFN will be doing a desktop TLUS for submission to BC Hydro in 2013.

The traditional territory of the DKFN is located within the area of Treaty 8, largely south of Great Slave Lake in the southern part of the Northwest Territories. DKFN assert that their territory also extends to the north side of Great Slave Lake. The DKFN is a member of the Akaitcho First Nations (AFN) and the Akaitcho Treaty 8 Tribal Corporation. The asserted territory of the AFN encompasses 480,000 km^2 in southern Northwest Territories and a small area in northeastern Alberta (see Volume 5 Appendix A05 Part 1, Map of Asserted Territory of the Akaitcho Territory First Nations).

DKFN members are reported to fish, moose hunt, and trap ptarmigan and rabbit year-round within their traditional territory (Akaitcho Treaty 8 Tribal Corporation 2012). At a meeting between BC Hydro and DKFN Councillors on February 17, 2009, elders, staff, and community members, a DKFN staff member advised that Deninu K'ue use the Slave River and Great Slave Lake as a refrigerator, and that fish, moose, and berries come from the area (Volume 5 Appendix A05, Part 2).

The current use of lands and resources for traditional purposes LAA is distant from the traditional territory of the DKFN in southern Northwest Territories. No past or current use of lands and resources by DKFN members within the LAA has been identified, nor had any information been identified relating to reasonably anticipated future use of lands and resources within the LAA by DKFN members at the time of writing. When the DKFN submits its desktop study to BC Hydro, the results of the study will be considered and incorporated into the EIS, where appropriate.

19.3.1.12 Kelly Lake Métis Settlement Society

19.3.1.12.1 Background – Kelly Lake Métis Settlement Society

Kelly Lake Métis Settlement Society (KLMSS) is located at Kelly Lake, 120 km southwest of Dawson Creek. According to the KLMSS, approximately 160 people reside in Kelly Lake, and an additional 189 people remain connected with the community. Most people in Kelly Lake identify as Métis and have membership with KLMSS (Kelly Lake Métis Settlement Society 2012).

19.3.1.12.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Kelly Lake Métis Settlement Society

Information on KLMSS current and future use of lands and resources presented in this section is derived primarily from the KLMSS Aboriginal Traditional Knowledge Assessment report (KLMSS ATKA) undertaken for the KLMSS by KSDavison & Associates (2012) and funded by BC Hydro (Davison et al. 2012). A limited range of publicly available and unpublished sources was also reviewed

The KLMSS Traditional Territory (Volume 5, Appendix A12, Part 1) is portrayed as including the portions of the current use of lands and resources for traditional purposes LAA that lie to the south of the Peace River, and between Williston Reservoir and Peace River, Alberta. The spatial boundaries for the KLMSS ATKA Local Study Area is an approximately 30 km by 55 km rectangle centred on the Project area.

The KLMSS Traditional Territory is described as an area that has been used by the Métis people of Kelly Lake since the early 1800s for purposes such as guiding, trapping, hunting, fishing, and spiritual practices. The KLMSS traditional reliance on the "bush economy" is described as including hunting, trapping, and fishing.

19.3.1.12.3 Current Hunting and Trapping – Kelly Lake Métis Settlement Society

The KLMSS ATKA reports that KLMSS members hunt large mammals, including moose and bear, and trap small game, including beaver, muskrat, lynx, marten, squirrel, weasel, otter, wolf, fisher, coyote, mink, wolverine, and fox. One KLMSS member's moose harvesting area was reported to be outside the LAA at Charlie Lake and to extend as far as Beatton River (Davison et al. 2012).

At a meeting with BC Hydro on April 12, 2012, a KLMSS representative confirmed that KLMSS members hunt at the edge of the Peace River, north of Fort St. John around Blueberry. KLMSS indicated that members found it challenging to hunt in the Project area since KLMSS members would need to ask farmers for permission. While members currently use the area, use has decreased over the past 60 years (see Volume 5 Appendix A12, Part 2).

Location and Current Use of Traplines

There are no registered traplines held by KLMSS members in the LAA.

19.3.1.12.4 Trails, Places, and Other Cultural Features – Kelly Lake Métis Settlement Society

Beyond their main settlement, Kelly Lake Métis are reported to have occupied camps and cabins related to trapping and berry picking activities within their traditional territory (see Volume 5 Appendix A12 Part 5, Figure 3).

Although not used as frequently as in the past, these locations are described as continuing to be important to the Kelly Lake Métis. Burials are reportedly associated with some of these sites (Davidson et al. 2012). The Belcourt Lake area (see Volume 5 Appendix A12 Part 5, Map 4) is highly valued by Kelly Lake Métis for its ecological productivity and purity, and as a cultural and ecological refuge that can support the traditional lifestyle and culture of Kelly Lake Métis now and in the future, should other harvesting areas decline.

The KLMSS ATKA presents information about KLMSS traditional use activities other than hunting, fishing, and trapping that include berry picking, medicinal plant harvesting, gathering areas, settlements, trails, and burials, but no specific reference to such activities currently occurring at locations within the current use of lands and resources LAA (Davison et al. 2012). Consultation is ongoing between BC Hydro and KLMSS, and may yet yield information on the current and reasonably anticipated future use of lands and resources within the LAA. Should KLMSS share such information with BC Hydro, it will be considered and incorporated in the EIS during the EIS review phase.

19.3.1.13 Kwadacha First Nation

19.3.1.13.1 Background – Kwadacha First Nation

The Kwadacha First Nation (KFN) are a Sekani (Tsek'ene) people who occupy the Rocky Mountain Trench area of northern British Columbia (Jenness 1937;

Denniston 1981). They are closely related by kinship and intermarriage to the Tsay Keh Dene First Nation and the Takla Lake First Nation. In 2007, the territory of the three First Nations was described as that part of the Rocky Mountain Trench that is drained by the Finlay and Parsnip Rivers. The territory extends north to the confluence of the Kechika and Gataga Rivers, and to the west of Takla Lake, Bear Lake, and Kitchener Lake (Littlefield et al. 2007, Figure 1). The three First Nations act as an alliance, the Tse Keh Nay First Nations, when dealing with issues in areas of common geographic interest (Littlefield et al. 2007; Tse Keh Nay First Nations and B.C. 2008). KFN is a member of the Kaska Dena Council.

KFN has three reserves situated in northeastern B.C. in the Rocky Mountain Trench, a valley formed by the eastern and central ranges of the Rocky Mountains. The largest reserve is Fort Ware No. 1 (388 ha) which is accessible by logging road from Mackenzie or by air from Prince George; the others are small fishing reserves on nearby lakes Sucker Lake No. 2, and Weissener Lake No. 3 (Littlefield et al. 2007).

19.3.1.13.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Kwadacha First Nation

A limited number of published and unpublished reports were consulted for information on KFN traditional land and resource uses. BC Hydro did not enter into a Traditional Land Use Study agreement with KFN, and no traditional land use information was made available by KFN for consideration in this review.

KFN territory is described together with Takla Lake First Nation and Tse Keh Dene First Nation (Littlefield et al. 2007, Figure 1) and is included as part of the territory of First Nations in the Kaska Dena Council on the treaty negotiations map (BC Treaty Commission and, Map of the Traditional Territory of the First Nations of the Kaska Dene Council) (BC Treaty Commission 2001). The southern boundary of this territory abuts Tsay Keh Dene traditional territory.

The traditional territory of the KFN is located north and west of the current use of lands and resources for traditional purposes LAA.

KFN reportedly continue to recognize family hunting territories (keyoh) within their territory in the Rocky Mountain Trench (Vanden Berg & Associates 2000; Littlefield et al. 2007). Some KFN people also hold registered traplines in the same region. KFN are described as continuing to live a lifestyle largely based on hunting, fishing, and the gathering of plants for food and medicine within their traditional territory (see Volume 5 Appendix A13 Part 3, Figure 1). Country foods reportedly remain an important component of their economy (Vanden Berg & Associates 2000; Littlefield et al. 2007). It is reasonable to assume that KFN members will continue to use land and resources within their traditional territory for traditional purposes into the future. At a meeting with BC Hydro on September 13, 2012, KFN expressed concern over increased hunting and access in their region resulting from pressure from the Project and other projects in the Peace Region (see Volume 5 Appendix A13, Part 2).

No information was identified that described or documented past, current, or reasonably anticipated future KFN use of lands or resources for traditional purposes in the current use of lands and resources for traditional purposes LAA. Consultation is ongoing between BC Hydro and KFN, and may yet yield information on the current and reasonably anticipated future use of lands and resources within the LAA. Should KFN

share such information with BC Hydro, it will be considered and incorporated in the EIS during the EIS review phase.

19.3.1.14 Little Red River Cree Nation

19.3.1.14.1 Background – Little Red River Cree Nation

The Little Red River Cree Nation (LRRCN) has three communities situated roughly 150 km east of High Level, Alberta: Fox Lake IR 162, John D'Or Prairie IL 215, and Garden Creek Indian Settlement (located within the Wood Buffalo National Park) (LRRCN 1999-2001). LRRCN's reserves have a total area of 24,472.3 ha (AANDC 2012k). The majority of the population lives at Fox Lake, where there is no year-round road access, but the administrative centre is located at John D'Or Prairie (LRRCN 1999-2001).

As of December 2012, the LRRCN had a total population of 4,947 people, of whom 3,808 live on-reserve. LRRCN has a Chief and 10 Councillors, and uses a custom electoral system (AANDC 2012k).

The LRRCN is a member of the North Peace Tribal Council along with the BFN, DTFN and Tallcree First Nation (North Peace Tribal Council 2012). LRRCN is also a member of the Treaty 8 First Nations of Alberta (Treaty 8 First nations of Alberta 2012).

19.3.1.14.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Little Red River Cree Nation

Baseline information on the past, current, and future use of lands and resources by the LRRCN was obtained from online research. BC Hydro did not enter into a TLUS agreement with LRRCN, and no traditional land use information was made available by LRRCN for consideration in this review.

The traditional lands of the LRRCN are located in the Peace River Lowlands in the region of the Mikkwa and Wabasca Rivers and southwestern Caribou Mountains in Alberta (Schramm et al. 2002, Figure 1). These are outside of the current use of lands and resources for traditional purposes LAA.

Until the early 1960s, many LRRCN members are reported to have lived out on the land on their traplines. Today, many LRRCN members are described as still relying on the resources of the land for subsistence. Within their traditional territory, LRRCN members are reported to hunt, fish, trap, and harvest plants. Moose is described as the preferred species for hunting, but members also hunt waterfowl (ducks and geese), Grouse, rabbit, beaver, muskrat, and bear. Fish is also named as an important food source. Trapping reportedly continues, but on a limited scale. Members pick berries and gather medicinal plants (Schramm et al. 2002).

On October 22, 2008, at a meeting with LRRCN, the LRRCN advisor referred to the drying out of the Wabasca River wetlands near Vermilion Chutes, an area shared by LRRCN, BFN, and Tallcree. He suggested that BC Hydro support mitigation measures in the form of the removal of willow growth and the restoration of the area to meadow. At the same meeting, the LRRCN Chief asked about compensation for the loss of use of the ice bridge at Tompkins Landing that LRRCN members rely on.

At meetings with BC Hydro on April 24 and August 13, 2009, LRRCN indicated that it was interested in all areas of the Project, but especially in the hydrology of the river.

In particular, their concerns centred on the potential effect of the Project on the ice bridge at Tompkins Landing, which community members depend on during the winter (Volume 5 Appendix A14, Part 2).

The current use of lands and resources for traditional purposes LAA is distant from the traditional territory of the LRRCN. No specific information was identified that described or documented current or future use by the LRRCN of lands and resources within the LAA for hunting, fishing, trapping, or other traditional activities. Consultation is ongoing between BC Hydro and LRRCN, and may yet yield information on the current and reasonably anticipated future use of lands and resources within the LAA. Should LRRCN share such information with BC Hydro, it will be considered and incorporated in the EIS during the EIS review phase.

19.3.1.15 Mikisew Cree First Nation

19.3.1.15.1 Background – Mikisew Cree First Nation

As of December 2012, Mikisew Cree First Nation (MCFN) had a registered population of 2,841, with 155 members living on MCFN's reserves and 510 on their own Crown land (AANDC 2012l). The nine MCFN reserves, created in 1986, are located in the region of the Peace-Athabasca Delta and northwest of Lake Athabasca (FMA Heritage Inc. 2010, Figure 3). While MCFN's economic and administrative centre has been Fort Chipewyan for generations, their cultural heartlands are Wood Buffalo National Park and the Athabasca River (Candler et al. 2012a).

MCFN has a Chief and six Councillors, and follows a custom election system (AANDC 2012l). MCFN is a member of the Athabasca Tribal Council, together with ACFN, Chipewyan Prairie First Nation, Fort McKay First Nation, and Fort McMurray No. 468 First Nation (Athabasca Tribal Council 2009-2012).

19.3.1.15.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Mikisew Cree First Nation

Information on current use of lands and resources by the MCFN was derived from a limited number of publicly available published and unpublished studies, including a number of TLUS reports. The MCFN and ACFN also submitted a joint Desktop Knowledge and Use Report for BC Hydro's Proposed Site "C" Dam Project. The Study Area for the Desktop Report was the section of the Peace River from the western edge of Wood Buffalo National Park to the junction of the Peace and Slave Rivers in the east (Candler et al. 2012c).

Within their traditional territory, MCFN are reported as continuing to use lands and resources for traditional purposes and expect to do so in the future. Big game animals are described as providing a large portion of MCFN diet (Elias 2010). In the past, moose, caribou, and bison were reported to be the major species hunted. Currently, moose is named as the most commonly hunted large mammal.

The following are also described as important food resources for MCFN members:

- Waterfowl – ducks and geese
- Fish – whitefish, pike, walleye, burbot, trout, suckers, and goldeye
- Small fur-bearers – beaver (Elias 2010)

When selecting lands for traditional activities within their traditional territory, MCFN members reportedly look for the following characteristics: prime resource habitat; proximity to places suitable for establishing habitations (cabins, camps); located on a well-travelled traditional trail or other land access route or with easy river access; and distant from industrial disturbance (Elias 2010).

One of the main concerns of the MCFN is the ability to continue to exercise their Aboriginal and treaty rights well into the future (Elias 2010; CIER 2011). The MCFN assert that the scale and number of resource developments in MCFN territory has already limited the ability of MCFN members to exercise these rights (Elias 2010; Elias 2011).

The MCFN traditional territory (See Volume 5 Appendix A18 Part 3, Figure 1) is distant from the current use of lands and resources for traditional purposes LAA. No specific information was identified that described or documented current use by the MCFN of lands and resources within the LAA for hunting, fishing, trapping activities, or other traditional activities.

19.3.1.16 Salt River First Nation

19.3.1.16.1 Background – Salt River First Nation

In December 2012, the registered population of the Salt River First Nation (SRFN) was 923, of whom five were recorded as living on-reserve. The SRFN Treaty Settlement Agreement was signed in March 2002. The SRFN has three reserves: Salt Plains 195 and Salt River 195 in the Northwest Territories; and Fitzgerald 196 in Alberta, along with one settlement at Fort Smith in the Northwest Territories. SRFN also have four land parcels in Wood Buffalo National Park that are to become Indian Reserves (Salt River First Nation and Canada 2002). SRFN has a Chief and four Councillors and follows a custom electoral system (AANDC 2012n).

SRFN is a member of Akaitcho Territory Government (AANDC 2012n).

19.3.1.16.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Salt River First Nation

Information on the SRFN and on past, current, and reasonably anticipated future use of lands and resources by SRFN was obtained through online research. BC Hydro did not enter into a Traditional Land Use Study agreement with SRFN, and no traditional land use information was made available by SRFN for consideration in this review.

The traditional territory of the SRFN is located in the region of northeastern Alberta and southern Northwest Territories.

The current use of lands and resources for traditional purposes LAA is distant from the traditional lands of the SRFN. No specific information was identified that described or documented SRFN current or reasonably anticipated future use of lands and resources for hunting, fishing, trapping, or other traditional activities within the LAA. Consultation is ongoing between BC Hydro and SRFN, and may yet yield information on the current and reasonably anticipated future use of lands and resources within the LAA. Should SRFN share such information with BC Hydro, it will be considered and incorporated in the EIS, as appropriate, during the EIS review phase.

19.3.1.17 Smith's Landing First Nation

19.3.1.17.1 Background – Smith's Landing First Nation

In 2000, Smith's Landing First Nation (SLFN) signed a Treaty Entitlement Settlement Agreement with Canada and Alberta (Canada and Smith's Landing First Nation 2000). The SLFN has 10 reserves located in and around the Wood Buffalo National Park along the Alberta/Northwest Territories border near Fort Smith totalling 10,049.7 ha (see Volum3 5 Appendix A24 Part 3 Map Depicting Location of Smith's Landing First Nation Indian Reserves in Northeastern Alberta) (AANDC 2012o; Smith's Landing First Nation 2012).

In December 2012, the SLFN had a registered population of 331. No community members are recorded as living on any of the Reserves (AANDC 2012o). Fort Smith, Northwest Territories, is the SLFN main community and where the SLFN offices are located.

The SLFN has a Chief and four Councillors and uses a custom electoral system (AANDC 2012o). The SLFN is an independent member of the Treaty 8 First Nations of Alberta (Treaty 8 First Nations of Alberta 2012).

19.3.1.17.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Smith's Landing First Nation

Information on the SLFN and on past, current, and reasonably anticipated future use of lands and resources by SLFN was obtained through online research. BC Hydro did not enter into a Traditional Land Use Study agreement with SLFN, and no traditional land use information was made available by SLFN for consideration in this review.

The traditional territory of the SLFN is located in northeastern Alberta and the southern part of the Northwest Territories. The 10 SLFN Indian Reserves that were established by the Treaty Entitlement Settlement Agreement are all located in northeastern Alberta close to the Northwest Territories border, reflecting the importance of this region to the SLFN. This region is interpreted to be the major area where SLFN members exercise asserted Aboriginal or treaty rights.

At a meeting with BC Hydro on August 28, 2012, the SLFN Chief noted that his community was concerned about fish and wildlife and the impact of water levels in their local area. (Volume 5 Appendix A24, Part 2).

The current use of lands and resources for traditional purposes LAA is distant from the location of the SLFN. No specific information was identified that described or documented SLFN current or reasonably anticipated future use of lands and resources for hunting, fishing, trapping, or other traditional activities within the LAA. Consultation is ongoing between BC Hydro and SLFN, and may yet yield information on the current and reasonably anticipated future use of lands and resources within the LAA. Should SLFN share such information with BC Hydro, it will be considered and incorporated in the EIS, as appropriate, during the EIS review phase.

19.3.1.18 Sturgeon Lake Cree Nation

19.3.1.18.1 Background – Sturgeon Lake Cree Nation

The Sturgeon Lake Cree Nation (SLCN) has three reserves on 15,664.5 ha (AANDC 2012p). The main population is located 365 km northwest of Edmonton, 97 km east of Grand Prairie and 12 km west of Valley View (Sturgeon Lake Cree Nation 2012).

As of December 2012, SLCN has a registered population of 3,003 people, with 1,396 members living on-reserve. SLCN has a Chief and six Councillors, and uses a custom electoral system (AANDC 2012p).

The SLCN is a member of the Treaty 8 First Nations of Alberta (Treaty 8 First Nations of Alberta 2012) and of the Western Cree Tribal Council, along with DFN and HLFN (Western Cree Tribal Council 2012).

19.3.1.18.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Sturgeon Lake Cree Nation

Information on SLCN's current use of lands and resources was obtained from online research. BC Hydro did not enter into a TLUS agreement with SLCN, and no traditional land use information was made available by SLCN for consideration in this review.

The current use of lands and resources for traditional purposes LAA is distant from the location of the SLCN. No specific information was identified that described or documented SLCN current or reasonably anticipated future use of lands and resources for hunting, fishing, trapping, or other traditional activities within the LAA. Consultation is ongoing between BC Hydro and SLCN, and may yet yield information on the current and reasonably anticipated future use of lands and resources within the LAA. Should SLCN share such information with BC Hydro, it will be considered and incorporated in the EIS, as appropriate, during the EIS review phase.

19.3.1.19 Tallcree First Nation

19.3.1.19.1 Background – Tallcree First Nation

Tallcree First Nation (TFN) has seven reserves totalling 8,160.3 ha near Fort Vermilion, Alberta. As of December 2012, TFN has a registered population of 1,232, with 467 members living on-reserve. TFN has a Chief and four Councillors, and uses a custom electoral system (AANDC 2012q).

TFN is a member of the North Peace Tribal Council along with the BFN, DTFN, LRRCN, and Lubicon First Nations (North Peace Tribal Council 2012). TFN is also a member of the Treaty 8 First Nations of Alberta. (Treaty 8 First Nations of Alberta 2012).

19.3.1.19.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Tallcree First Nation

Information on the TFN and on past, current, and future use of lands and resources by TFN was obtained from online research. BC Hydro did not enter into a TLUS agreement with TFN, and no traditional land use information was made available by TFN for consideration in this review.

The current use of lands and resources for traditional purposes LAA is distant from the location of the TFN. No specific information was identified that described or documented past, current, or future use by the TFN of lands and resources within the LAA for hunting, fishing, trapping, and other traditional activities. Consultation is ongoing between BC Hydro and TFN, and may yet yield information on the current and reasonably anticipated future use of lands and resources within the LAA. Should TFN share such information with BC Hydro, it will be considered and incorporated in the EIS, as appropriate, during the EIS review phase.

19.3.1.20 Tsay Keh Dene First Nation

19.3.1.20.1 Background – Tsay Keh Dene First Nation

The Tsay Keh Dene First Nation (TKDFN) are a Tse Keh Ney (Sekani) people who occupy the Rocky Mountain Trench area of northern British Columbia (Denniston 1981; Jenness 1937). The TKDFN are closely related by kinship and intermarriage to the KFN and the Takla Lake First Nation. In 2007, the territory of the three First Nations was described as that part of the Rocky Mountain Trench that is drained by the Finlay and Parsnip Rivers. The territory extends north to the confluence of the Kechika and Gataga Rivers, and to the west of Takla Lake, Bear Lake, and Kitchener Lake (Tsay Keh Nay First Nations and Province of B.C. 2008; Littlefield et al. 2007). The three First Nations act as an alliance, the Tse Keh Nay First Nations, when dealing with issues in areas of common geographic interest.

The main TKDFN community is located at the north end of Williston Reservoir, approximately 430 km north of Prince George. The TKDFN has three Indian Reserves (Police Meadow IR No. 2, Tutu Creek IR No. 4, Parsnip IR No. 5), and two federal land parcels (Ingenika Settlement, Mesilinka) that are to be converted to Indian Reserves. As of December 2012, the band had a registered population of 447, with 66 members living on Tsay Keh Dene's reserves and 166 members living on their own Crown land (AANDC 2012r).

19.3.1.20.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Tsay Keh Dene First Nation

TKDFN traditional territory, as described by the BC Treaty Commission and set out in the TKDFN Statement of Intent for the BC Treaty Commission, extends north to Mount Trace, west to South Pass Peak, south to Nation River, and east to Mount Laurier (BC Treaty Commission 1994). This depiction of TDKFN traditional territory is also the area in which BC Hydro and TKDFN reached a Settlement Agreement in 2006. The Agreement included provisions relating to the Project (Tsay Keh Nay First Nation, BC Hydro, Province of B.C. 2006).

TKDFN are described as continuing to live a lifestyle largely based on the lands and resources within their traditional territory (BC Treaty Commission 1994) (Tsay Keh Nay First Nations and Province of B.C. 2008).

No specific information was identified that described or documented current or reasonably anticipated future TKDFN use of lands and resources in the LAA for hunting, fishing, trapping, or other traditional activities. Consultation is ongoing between BC Hydro and TKDFN, and may yet yield information on the current and reasonably anticipated future use of lands and resources within the LAA. Should TKDFN share such

information with BC Hydro, it will be considered and incorporated in the EIS, as appropriate, during the EIS review phase.

19.3.1.21 Woodland Cree First Nation

19.3.1.21.1 Background – Woodland Cree First Nation

The Woodland Cree First Nation (WCFN) has three reserves on 16,106 ha northeast of Peace River, Alberta. As of December 2012, the WCFN has a registered population of 1,042, with 735 members living on WCFN's reserves and seven members living on their own Crown land. WCFN has a Chief and four Councillors, and uses a custom electoral system (AANDC 2012t).

19.3.1.21.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Woodland Cree First Nation

Information on the WCFN and on past, current, and future use of lands and resources by TCFN was obtained from online research. BC Hydro did not enter into a Traditional Land Use Study agreement with WCFN, and no traditional land use information was made available by WCFN for consideration in this review.

The current use of lands and resources for traditional purposes LAA is distant from the location of the WCFN. No specific information was identified that described or documented past, current, or future use by the WCFN of lands and resources within the LAA for hunting, fishing, trapping, and other traditional activities. Consultation is ongoing between BC Hydro and WCFN, and may yet yield information on the current and reasonably anticipated future use of lands and resources within the LAA and RAA. Should WCFN share such information with BC Hydro, it will be considered and incorporated in the EIS, as appropriate, during the EIS review phase.

19.3.1.22 Fort Chipewyan Métis Nation Local 125

19.3.1.22.1 Background Fort Chipewyan Métis Local 125

The Fort Chipewyan Métis (FCM) are located in the community of Fort Chipewyan, Alberta. In August 2012, the population of the FCM Local 125 was 173 (Fort Chipewyan Métis, President 2012 pers. comm.).

Alberta's June 2010 Métis Harvesting Policy acknowledges FCM as "both a historic and contemporary rights bearing community". The Policy also creates a notional harvesting area of 160 km around its community, in the absence of a more definitive description of the community's harvesting area (Alberta Sustainable Resource Development 2010).

FCM is a member of Métis Nation of Alberta, Region 1 (which covers an area from Highway 28 north to the Northwest Territories border and from Athabasca to the Saskatchewan border) (Métis Nation of Alberta Region 1 2012).

The FCM assert that they are vested with both Aboriginal and constitutionally protected rights:

- Whose origins predate Canadian confederation and the creation of Alberta, British Columbia, Saskatchewan and Northwest Territories

- That are larger in scope and more robust than First Nations' rights because of the adaptive Powley 'effective control test'

19.3.1.22.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Fort Chipewyan Métis (Local 125)

Information on current and past use of lands and resources by the FCM was derived from a limited number of publicly available published and unpublished studies. BC Hydro did not enter into a TLUS agreement with FCM, and no traditional land use information was made available by FCM for consideration in this review. In 2008, the FCM established a Study Area for a TLUS that is the same as a proposed Fort Chipewyan Métis Harvesting Area (Fort Chipewyan Métis, President 2012 pers. comm.).

On September 12, 2011, FCM advised that community members use an ice bridge on the Peace River (Volume 5 Appendix A08, Part 2).

No specific information was identified that described or documented current or reasonably anticipated future use by the FCM of lands and resources within the current use of lands and resources for traditional purposes LAA for hunting, trapping, fishing, or other traditional activities.

Consultation is ongoing between BC Hydro and FCM, and may yet yield information on the current and reasonably anticipated future use of lands and resources within the LAA. Should FCM share such information with BC Hydro, it will be considered and incorporated in the EIS, as appropriate, during the EIS review phase.

19.3.1.23 Métis Nation of Alberta Region 6

19.3.1.23.1 Background Métis Nation of Alberta Region 6

The Métis Nation of Alberta is a political organization established in 1928 to advocate on behalf of Métis people in Alberta (Métis Nation of Alberta 2007-2012a). Region 6 of the Métis Nation of Alberta is located in northwest Alberta, with its office located in Peace River, Alberta (Métis Nation of Alberta 2007-2012b). The Peace River runs through much of Region 6. Métis communities within Region 6 include Fort Vermilion, Dunvegan and Peace River (MNAR6, Métis Liaison Officer 2012, pers. comm).

The office of the Métis Nation of Alberta Region 6 (MNAR-6) is located in Peace River, Alberta. Over 7,000 Métis live in the Region (MNAR6, Métis Liaison Officer 2012, pers. comm).

19.3.1.23.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Métis Nation of Alberta Region 6

Information on current and past use of lands and resources by the MNAR-6 was obtained from online research. BC Hydro did not enter into a Traditional Land Use Study agreement with the MNAR-6 and no traditional land use information was made available by the MNAR-6 for consideration in this review.

The MNAR-6 is located in northwestern Alberta (Alberta Intergovernmental and Aboriginal Relations 2012, Map of Métis Settlements and Métis Nation of Alberta Association Regional Zones), within the traditional territory historically occupied by the Métis. The Peace River is a central feature of Region 6.

At an MNAR-6 workshop regarding the Project, one family stated that they used the Peace River all year for their income and traditional activities, all participants stated that they used the Peace River for family gatherings and ceremonies, and many indicated that they felt exercise of their Aboriginal rights would be impacted by the Project (Volume 5 Appendix A16, Part 2). At a meeting with BC Hydro on November 30, 2012, MNAR-6 advised that they use bridges such as Shaftesbury for access to lands, and fish, hunt and trap along the Peace River.

The current use of lands and resources for traditional purposes LAA is distant from the location of the MNAR-6. No specific information was identified that described or documented current or reasonably anticipated future use by the MNAR-6 of lands and resources within LAA for hunting, fishing, trapping, or other traditional activities.

Consultation is ongoing between BC Hydro and the MNAR-6, and may yet yield information on the current and reasonably anticipated future use of lands and resources within the LAA. Should the MNAR-6 share such information with BC Hydro, it will be considered and incorporated in the EIS, as appropriate, during the EIS review phase.

19.3.1.24 Métis Nation of British Columbia

19.3.1.24.1 Background – Métis Nation BC

The MNBC was created in 1996 to represent the Métis people of British Columbia and incorporated under the Métis Provincial Council of British Columbia (MNBC 2012a).

19.3.1.24.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Métis Nation BC

Information on the MNBC, and on current and past use of lands and resources by the MNBC, was obtained from online research and from a brief report and letter of clarification from MNBC to BC Hydro. The information provided in the MNBC report and clarification letter was obtained from the MNBC Traditional Harvesting Database and preliminary Métis Traditional Knowledge (MTK) research (MNBC 2012c). BC Hydro did not enter into a TLUS agreement with MNBC.

MNBC stated that the Métis currently harvest large quantities of game, birds, medicinal, and other plants and berries from the Project area, and that the most important harvesting areas are the Peace River and Pine River watersheds (MNBC 2012b, 2012c). The harvesting areas are likely to be, at least in part, within the current use of lands and resources for traditional purposes LAA.

In a meeting with BC Hydro in July 2012, representatives of MNBC discussed their traditional use and knowledge of the Peace region. One member advised that he has a cabin and traps on Monias Lake on the south bank of the Peace River, and traps north of Hudson's Hope (Volume 5 Appendix A17, Part 2).

The MNBC identified concern regarding the potential effects of the Project on the ability of harvesters to continue to use the Project area for sustenance, social, and ceremonial purposes (MNBC 2012c).

Consultation is ongoing between BC Hydro and the MNBC, and may yet yield information on the current and reasonably anticipated future use of lands and resources within the current use of lands and resources for traditional purposes LAA. Should the

MNBC share such information with BC Hydro, it will be considered and incorporated in the EIS, as appropriate, during the EIS review phase.

19.3.1.25 Northwest Territory Métis Nation

19.3.1.25.1 Background – Northwest Territory Métis Nation

The Northwest Territory Métis Nation (NWTMN) also refer to themselves as the indigenous Métis of South Slave Lake. Members of the NWTMN reside mainly in the communities of Hay River, Fort Smith, Fort Resolution, and Yellowknife in the Northwest Territories (NWTMN 2007-2012). The NWTMN's territory extends throughout the Northwest Territories and into northern Alberta (NWTMN 2011).

The NWTMN is currently negotiating an agreement on land, resources, and self-government with Canada and the Government of the Northwest Territories. The Parties achieved an Agreement-in-Principle in 2012. The region under discussion is the southeast corner of the Northwest Territories depicted on the Interim Measures Agreement map (NWTMN, Indian and Northern Affairs Canada, Government of the Northwest Territories and, Map of the Northwest Territory Métis Nation Interim Measures Agreement Area) (NWTMN 2007-2012).

19.3.1.25.1 Current and Reasonably Anticipated Future Use of Lands and Resources – Northwest Territory Métis Nation

Information on the NWTMN and on current and past use of lands and resources by the NWTMN was obtained from online research. The NWTMN did not conduct a TLUS for the Project.

The current use of lands and resources for traditional purposes LAA is distant from the traditional lands of the NWTMN. On November 28, 2012, at a meeting with NWTMN, NWTMN informed BC Hydro that their members exercise Aboriginal rights in the South Slave Lake Region. At the same meeting, community members talked about fishing in Great Slave Lake and the Slave River, and expressed a strong interest in trapping and gathering as part of the continuing way of life. One member told BC Hydro that he built a winter road to access his trapline on the east side of the Peace River, but it suffered damage due to irregular flows in the Peace River (Volume 5 Appendix A19, Part 2).

No specific information was identified that described or documented current or reasonably anticipated future use by the NWTMN of lands and resources for hunting, fishing, trapping, or other traditional activities within the LAA.

Consultation is ongoing between BC Hydro and the NWTMN, and may yet yield information on the current and reasonably anticipated future use of lands and resources for hunting, fishing, trapping, and other activities within the LAA. Should the NWTMN share such information with BC Hydro, it will be considered and incorporated in the EIS, as appropriate, during the EIS review phase.

19.3.1.26 Paddle Prairie Métis Settlement Society

19.3.1.26.1 Background – Paddle Prairie Métis Settlement Society

Paddle Prairie Métis Settlement (PPMSS) is a rural settlement located south of High Level, Alberta. The eastern boundary of the Settlement is the Peace River (Alberta

Intergovernmental and Aboriginal Relations 2012, Map of Métis Settlements and Métis Nation of Alberta Association Regional Zones). Paddle Prairie was established in 1938. In 1990, the Paddle Prairie Métis were incorporated as a Métis Settlement and received a land base of 169,909 ha under letters patent from Alberta.

The Paddle Prairie Settlement consists of members who are Métis peoples whose traditional lands encompass most of northern Alberta.

PPMSS has a population of 1,464 members.

19.3.1.26.2 Current and Reasonably Anticipated Future Use of Lands and Resources – Paddle Prairie Métis Settlement Society

Information on Paddle Prairie Métis Settlement Society (PPMSS) and on current and past use of lands and resources by the PPMSS was obtained from online research. Paddle Prairie did not conduct a TLUS for the Project.

The current use of lands and resources for traditional purposes LAA is distant from the traditional lands of PPMSS. No specific information was identified that described or documented current or reasonably anticipated future use by PPMSS of lands and resources for hunting, fishing, trapping or other traditional activities within the LAA.

Consultation is ongoing between BC Hydro and the PPMSS, and may yet yield information on the current and reasonably anticipated future use of lands and resources for hunting, fishing, trapping, and other activities within the LAA. Should PPMSS share such information with BC Hydro, it will be considered and incorporated in the EIS, as appropriate, during the EIS review phase.

19.4 Effects Assessment

As indicated in Section 19.1.2, the organization of key aspects differs from the EIS Guideline in order to facilitate an analysis of specific current use of lands and resources for traditional purposes separately.

Section 15.2.4 of the EIS Guidelines states that the potential to adversely affect current use of lands and resources by Aboriginal persons for traditional purposes will be assessed by taking into account the potential for the Project to result in changes to key aspects:

- Use of and access to lands used for traditional purposes
- Availability of harvested species based on the results of the assessment of the potential effects of the Project on fish and fish habitat, vegetation and ecological communities, and wildlife resources
- Other relevant considerations raised by Aboriginal groups

However, this section presents the assessment of the potential to adversely affect current use of lands and resources for traditional purposes by taking into account the potential for the Project to result in changes to the following key aspects:

- Changes in fishing opportunities and practices
- Changes in hunting and trapping opportunities and practices
- Changes in other cultural and traditional uses of the land

The availability of and access to fishing, hunting and gathering resources and sites is based on the results of the assessment of the potential effects of the Project on fish and fish habitat, vegetation and ecological communities, and wildlife resources (Volume 2 Sections 12, 13 and 14, respectively).

Use of lands and resources for traditional purposes and the location of culturally important places are based on the results of TLUS reports prepared by Aboriginal groups for this Project or other projects, overlaid with the LAA, and on the results of consultation with BC Hydro.

Based on information received from Aboriginal groups and publicly available documents, BC Hydro's understanding of current use of lands and resources for traditional purposes by Aboriginal groups is as follows:

- The following Aboriginal groups have reported current use of lands and resources for traditional purposes in the LAA defined for this VC
    - BRFN
    - DTFN
    - DFN
    - HLFN
    - SFN
    - T8TA: DRFN, HRFN, PRFN and WMFN

Interactions are anticipated between the Project and current and reasonably anticipated future use in the LAA for the Aboriginal groups listed above and these groups are brought forward into the effects assessment.

- MLIB has no reported current use of lands and resources for traditional purposes in the LAA defined for this VC. The Project is not expected to have an effect on the current use of or access to lands and resources for traditional purposes for this First Nation and are, therefore not considered further in the effects assessment in this EIS. BC Hydro has provided funding for McLeod lake Indian Band to undertake a Traditional Land Use Study. When BC Hydro receives the TLUS, it will be considered and incorporated into the EIS, as appropriate.
- KLMSS and MNBC have indicated use of the Peace River valley in a general sense, but have not provided sufficient specific information on use within the LAA to enable an effects assessment. Should additional information regarding current and reasonably anticipated future use of lands and resources within the LAA be received from KLMSS or MNBC, BC Hydro will consider and incorporated it in the EIS, as appropriate, during the EIS review phase.
- The following 17 Aboriginal groups have no reported current use of lands and resources for traditional purposes within the LAA defined for this VC.
    - ACFN
    - BFN
    - DKFN
    - FCM

- FNFN
- KFN
- LRRCN
- MNAR-6
- MCFN
- NWTMN
- PPMSS
- SRFN
- SLFN
- SLCN
- TFN
- TKDFN
- WCFN

The Project is not expected to have an effect on the current use of or access to lands and resources for traditional purposes for these Aboriginal groups and they are therefore not considered further in the effects assessment in this EIS. Should additional information regarding current and reasonably anticipated future use of lands and resources within the LAA be received from the Aboriginal groups listed above, BC Hydro will consider and incorporated it in the EIS, as appropriate, during the EIS review phase.

19.4.1 Effects Assessment – Construction – Change in Fishing Opportunities and Practices

Potential Project effects during construction on fishing opportunities and practices are discussed at the Project component level, rather than the activity level, for this VC. An exception is made when information allows for an analysis of activity-level interactions.

Construction of the dam and generating station, Highway 29 re-alignment, access roads, transmission system and temporary worker accommodation may reduce fishing opportunities and practices of Aboriginal people through changes to access to fishing sites (including access to fishing sites by both Aboriginal harvesters and non-Aboriginal harvesters), fish health, movement, and survival, and fish habitat. Potential effects, proposed mitigation, and residual effects are detailed in Volume 2 Section 12 Fish and Fish Habitat. Changes in use of and access to fishing areas during construction are described in Volume 3 Section 24 Harvest of Fish and Wildlife Resources, albeit with reference to public, rather than Aboriginal fishing.

<u>Current Use of and Access to Fishing Areas—Overview</u>

Dunne-za and Cree fishing is often described by observers as a supplementary or secondary activity to hunting. Bouchard and Kennedy, writing of the BRFN, note that, even in the minds of BRFN members, the relative importance of fish contrasts with their considerable reliance on game:

“Fortunately, it is no longer the threat of famine that motivates people to fish, as Dane-zaa mythology suggests was once the situation, and today fishing continues to be

a valued albeit sporadic activity, a pursuit that offers the bonus of a change to the predominantly meat diet, along with a good day's diversion. (Kennedy 2011, 210).

Fishing is indicated to be an important feature of Aboriginal life in the area of the Project, as well as a right described in the text of Treaty 8.

In the LAA, fishing for cultural, recreational, and subsistence purposes is currently practised by members of the BRFN, SFN, T8TA, DFN, and HLFN throughout the mainstem Peace River from the stretch of river downstream of Fort St. John to the Williston Reservoir. Harvesters, following the availability of targeted species, appear to heavily favour the confluences of rivers, streams, and creeks with the Peace—especially at Bear Flats, Farrell Creek, Halfway River, Lynx Creek, and Moberly River. This pattern of use is most pronounced among members of the T8TA, BRFN, and SFN.

In addition, fishing is also done in a number of small lakes, creeks, and streams outside of the LAA, as well as, to a lesser extent, in the Dinosaur and Williston Reservoirs.

SFN, T8TA, and BRFN may be fishing more in the Peace River in the area of the proposed Project today than they had, historically. In the case of BRFN, Bouchard and Kennedy indicate that the former residents of the old BRFN Reserve near Fort St John had become isolated from their former sites on the Peace between Fort St. John and Hudson's Hope after their reserve had been resettled to its present location farther north in 1946. In recent decades, material prosperity, cars, and improved transport have facilitated the practice of traditional pursuits throughout a wider geographical area.

Ownership of pickup trucks is now common among BRFN members, making possible day- trips to hunting grounds and fisheries along the Peace River and elsewhere, including places not so easily accessible in the 1950s-1970s when vehicles were rare. (2012, 90)

An increased preference for the Peace may also reflect the diffusion of sport-fishing technologies and techniques for fishing. Bouchard and Kennedy make an observation that lends some credence to this, noting that Beaver traditional knowledge is limited on the subject of fish: "A few of the younger men who fish for sport with a rod and line have a broader knowledge of nomenclature and distinguish Dolly Varden (bull trout), rainbow trout, grayling, lake trout, grayling, lake trout, kokanee, and ling (burbot) from the less desirable jackfish, suckers, walleye and squawfish."

Table 12.6 Summary of traditional knowledge provided in Traditional Land Use Studies reports in Volume 2 Section 12 Fish and Fish Habitat provides a tabular summary of species and areas where they are pursued by Aboriginal Groups.

Fish harvesting by SFN members suggest that their preference is, for the most part, for the coldwater fishes, with the exception of jackfish and sucker. In the fish and fish habitat LAA, they fish primarily in the Peace River and in the Moberly River, but also elsewhere in smaller streams and water bodies south of the Peace River. Rainbow trout are described as being caught generally throughout the southwestern parts of the fish and fish habitat LAA with concentrations of activity in the Peace River and Moberly River. Bull trout are reported to be caught in the fish and fish habitat LAA in the Peace River in, and, to a lesser extent, along the Moberly River. Dolly Varden are caught in the Peace River and to a lesser extent in the Moberly River, and jackfish and grayling in the Moberly River.

T8TA members indicate fishing along the north side of the Peace River at the confluences with tributaries. Fish symbols are concentrated at confluences along the Peace River at Portage Creek, Lynx Creek, Halfway River, east of Taylor, and at the mouth of the Beatton River. There is also a small concentration on the Halfway River near Halfway River Reserve 168 (Candler, et al. 2012b, Map 9). In addition, several instances to the Peace Canyon dam tailrace and the Williston reservoir are made.

A majority of the 40 BRFN members interviewed for the BRFN TLUS indicated that the vicinity of the Project is a preferred area for pursuing traditional land use activities, including 8-10 interview participants who discussed fishing in the mainstem Peace River in the area of the future reservoir.

Fishing is described as occurring along the Peace River from the Alberta border to eastern Williston Lake. The confluences of the tributary rivers and creeks with the Peace River including Beatton River, Halfway River, Cache Creek and Farrell Creek are described as particularly important. The Peace River from the Peace Canyon Dam to the Alberta border, and the Halfway River to the Halfway River Reserve are within the fish and fish habitat LAA (Kennedy 2011, Blueberry River First Nations Fish Harvesting Map).

As a result of concerns regarding pollution from industrial and farming activities in other parts of BRFN territory, BRFN members say they rely more on the Halfway River and the mouths of streams flowing into the Peace River for their fish needs (Bouchard and Kennedy Research Consultants 2012a).

The Peace River and its tributaries offer the most species. The Halfway and its confluences (Cameron River, Cust Creek, Dunlevy Creek, and Gravel Creek) are second to the Peace for availability of species. In that location, the pattern of current use targeting the confluences of the main stem (in this case, the Halfway) is evident.

Lake fishing does not make up a large portion of BRFN fishing effort. Several species are pursued in Moberly Lake, and other lakes and small streams are indicated as places where a single or two species are pursued, including Stuart Lake (whitefish), Jackfish Lake (jackfish), Charlie Lake (suckers), Chinaman Lake (trout), Gwillim Lake (walleye).

BRFN reports a little fishing in the Dunleavy and Upper reaches of Williston Reservoir, mostly through the ice in winter for catfish, Dolly Varden, lake trout, and ling cod. Beatton (BRFN has indicated some fishing in the Beatton for suckers) and the Pine for grayling.

Fishing is still conducted outside the LAA; however, several sources indicated a renewed preference for the Peace. There may be several reasons for this in addition to those noted above. As early as 1979, Weinstein observed that BRFN members were avoiding conflict in Moberly with sportsfishers on Moberly Lake. They have expressed concern about pollution in Moberly River (2012 133). Pollution and invasive species have impacted Charlie Lake and Fish Creek (2012 111-112). Bouchard and Kennedy note that pollution in other localities forces BRFN members to use the Peace more. “Due to pollution in streams local to the BRFN Reserve, individuals did report driving to the Peace River specifically for fishing. Use of the Study Area is predominantly on a day-basis, although precise quantification of this assumption has not been possible.” (BRFN Methodology Report 2012).

In the LAA, fishing as practised by members of the BRFN, SFN, and T8TA, appears—based on the information provided to BC Hydro—to favour the confluences of rivers,

streams, and creeks with the Peace—especially at Bear Flats, Farrell Creek, Halfway, Lynx Creek, Moberly River. Downstream confluences where fishing is currently conducted include the Pine and Beatton rivers. Fishing is also done in a number of small lakes, creeks, and streams outside of the LAA, as well as, to a lesser extent, in the Dinosaur and Williston reservoirs.

Changes in Use of and Access to Fishing Areas During Construction

Several changes in access and use are described in Volume 3 Section 24 that are pertinent to this indicator and VC:

- Access restrictions due to construction activities would reduce access to and use of fishing opportunities and areas during construction. Access restrictions include the following:
  - Boat passage within the dam site area will be permanently restricted at the beginning of Year 1 of construction
  - Boat access will be restricted above and below the Project construction zone through the entire construction period. The exclusion above the construction zone will include approximately 3 km
  - In Year 2, a debris collection boom to be installed in the vicinity of Wilder Creek, approximately 12 km from the dam site will restrict river travel
  - Although access to the Peace River upstream of Wilder Creek would be permitted through the final six years of construction, temporary restrictions would be imposed for occasional, specific project activities that take place
  - Both the Lynx Creek and Halfway River boat launches are proposed to remain open during construction through to reservoir filling (in Year 7), although temporary closures may occur
  - Site C reservoir may be closed during reservoir filling due to debris and slope stability hazards

Access restrictions on the mainstem Peace River may limit the current fishing practices of BRFN, DTFN, DFN, HLFN, SFN, and the T8TA (see Table 19.7 for the species harvested). Several other Aboriginal groups, including Métis Nation BC, Métis Nation Alberta, and the KLMSS, have indicated use of the Peace River in a general sense, but have not provided sufficient specific information on use within the Current Use of Lands and Resources for Traditional Purposes LAA to enable an effects assessment.

Access restrictions in the early years of the Project will begin to affect fishing at several confluences identified as important harvesting locations by T8TA, SFN First Nations, and BRFN. Restricting access to the confluence of the Moberly and Peace River at beginning of Year 1 of construction would affect fishing by SFN members. Access to the mouth of Wilder Creek, and the area downstream to Moberly River will be altered in Year 2.

However, road and river access to the mouth of the Halfway River, indicated as an important fishing location by T8TA, SFN, and BRFN, will not be restricted in the early years of the Project.

Reduced ability to access fishing areas due to project construction schedules and restrictions represents a potential effect on the current fishing practices of all the

Aboriginal groups who currently use fisheries resources within the Fish and Fish Habitat LAA. Use of the river will be fragmented, as travellers will be restricted from attempting to go either upstream or downstream of the proposed dam site from Year 1 of construction. Although the zone of exclusion begins in Year 1 at 3 km above the construction zone, river travel may be further impeded the following year by the boom to be installed at Wilder Creek, 12 km from the dam site. These restrictions may affect those Aboriginal groups who have reported current use of the area surrounding the proposed Project and immediate adjacent areas, especially SFN, T8TA, and BRFN.

Aboriginal fishers may adapt to Project-related restrictions on access by using other access points and fishing areas, such as the Peace River downstream of the Project dam site, the Pine River, Dinosaur Reservoir, or other areas in the region.

Increased competition between fish harvesters may occur during the construction period, as Aboriginal groups and the public are forced to share fewer access points, and reduced areas for fishing. Construction activities are anticipated to result in a net increase of approximately 416 anglers by the end of Year 5 (a yearly average of 69 licenses) This is anticipated to decline thereafter, resulting in a net increase of 112 anglers over the entire construction period (See Table 24.18 Volume 3 Section 24 Harvest of Fish and Fish Habitat). This potential adverse effect, noted as a concern by T8TA, BRFN, DFN, and SFN, may be offset during operation by enhanced fishing opportunities that may develop at the reservoir.

<u>Changes in Availability of Targeted Species During Construction</u>

According to the effects assessment on fish and fish habitat (Volume 2 Section 12), the construction of the Project may result in the following changes to fish and fish habitat, which are relevant to this VC:

- The construction of the dam and generating station, Highway 29 realignment and Hudson's Hope shoreline protection would result in the loss of 198.50 ha of fish habitat, primarily in the Peace River, but also in the Moberly River, including the following:
    - Spawning and rearing habitats for whitefish, suckers and minnows in the Moberly
    - Feeding habitats for all adult species, in particular goldeye and pickerel in the Moberly
    - Spawning, rearing, feeding habitats along the south bank of the Peace for all adult species
    - High quality habitats within the dam generation zone, including the north bank of the Peace, providing habitat for Arctic grayling and mountain whitefish; and a channel along the north bank of the Peace providing habitat for Arctic grayling, bull trout, mountain whitefish, and rainbow trout will be destroyed by the North Bank haul road
- Highway 29 realignment will destroy 10.62 ha of fish habitat, mostly along the Peace River shoreline (.20 ha is along the Halfway River). Lost habitat includes feeding areas for bull trout along the Halfway River, and high quality spawning, rearing, or feeding habitats for mountain whitefish, Arctic grayling, bull trout, mountain whitefish, and rainbow trout.

- Construction of the Hudson's Hope shoreline protection will destroy 6.12 ha of fish habitat along the Peace, including high-quality rearing, feeding, and/or spawning habitats for bull trout, rainbow trout, mountain whitefish, and rainbow trout. The Fish and Fish Habitat effects assessment notes that this section of the Peace River is used by lake trout for rearing, feeding, and/or spawning.
- Filling of the Reservoir will result in the loss of 28 km^2 of Peace River fish habitat and 1.63 km of habitat in tributary streams.
- Sediments introduced during construction activity associated with the Dam and Generating Station may affect fish health and survival.
- The construction of the headpond and filling of the reservoir may impact fish health and survival (12-70) through stranding of fish and fish entrainment
- Sediments introduced during construction activity associated with the realignment of Highway 29 may affect fish health and survival.
- Increased Total Dissolved Gas (TDG) may impact the health and survival of fish during construction.
- Upstream fish movement may be impacted during the diversion stage of dam construction.

Volume 3 Section 24 Harvest of Fish and Wildlife Resources, notes that several Project effects on movement and aquatic productivity during construction may affect fishing by the public. These effects would also be felt by Aboriginal harvesters.

Effects on movement and aquatic productivity may reduce fishing success by way of a direct impact on availability of targeted fishes, or they may alter fishing effort by limiting the availability of desirable fishing locations due to increased turbidity or the perception of disturbance.

Although boat travel up and downstream of the dam site will be disrupted from Year 1 on, it is projected that fish will pass through the dam site with no effect during channelization (Years 1-4). It is anticipated that fishing opportunities and practices may remain unaffected downstream of the dam site during this period.

During river diversion (Years 5-7), opportunities to harvest fish from the cold/clear water group (including bull trout, Arctic grayling, and mountain whitefish) are anticipated to decline. In the same period, no effect is anticipated on opportunities to harvest fish from the cool/turbid water group (including walleye, burbot, and northern pike). Both fish groups are harvested in the LAA as part of the current fishing practices of First Nations who supplied information on land use to BC Hydro. The cold water group – including bull trout, "other" trout, and whitefish (undefined) – were indicated by British Columbia First Nations, while DFN and HLFN members reported more walleye and jackfish (See Table 19.7). It is anticipated that, during the river diversion years, fishing opportunities and practices for the cold water group will diminish—this effect will be felt most acutely upstream on the Peace River and its tributaries in British Columbia.

Also during river diversion, anticipated changes in water quality and turbidity may affect cold water species from Cache Creek to Pine River confluence, as they seek to avoid turbidity. Again, this effect is likely to be experienced most acutely among British Columbia First Nation fishers.

Inundation and the creation of the reservoir will reduce opportunities for fishing in the main stem Peace River and at its tributaries between Fort St. John and the Peace Canyon Dam by reducing access to fishing areas at a number of confluences with the Peace identified as important harvesting locations by First Nations, including Cache Creek (BRFN, T8TA); Farrell Creek (BRFN; DFN; T8TA), Halfway River (BRFN; T8TA); the Moberly River (Saulteau; DFN; T8TA). Consequently, inundation will adversely affect the current use of lands and resources for fishing for BRFN, DFN, SFN and T8TA. This effect will be caused by changes to access and destruction of riverine habitat (28 km^2 of Peace River fish habitat and 1.63 km of habitat in tributary streams). In total, 85 km (out of a possible 227 km) of main stem Peace River fishing area will be transformed into reservoir. Other confluences downstream of the proposed dam site will be unaffected, including the Pine and Beatton.

Similarly, other waterbodies within the LAA where fishing is currently conducted, including reservoirs and lakes, will be unaffected by the Project.

Changes in Use of Harvested Species During Construction

The TLUS reports received for the Project provides limited information on how Aboriginal groups use fish. However, it is reasonable to assume that the Aboriginal groups who currently fish for traditional purposes in the Project LAA use the resource for sustenance, recreational, and social purposes. Aboriginal groups have indicated that their ability to utilize the lands and resources of the Peace River basin for traditional purposes has been constrained by changes in the overall health of the of the Peace River and the availability and health of fish and wildlife which they attribute largely to development activities in the region. Aboriginal groups have indicated a reduced faith in country foods, including fish, as they perceive the quality of the resources to be compromised. This perception limits their desire both to go fishing in areas they believed to be less environmentally healthy, and to consume the fish.

Aboriginal groups have expressed concern that the Project would cause contamination of fish in the Peace River and its tributaries. This concern is noted several times in TLUS reports, and draws on experiences with earlier hydroelectric projects on the Peace. The Human Health Assessment (Volume 4 Section 33) which draws upon the results of the Human Health Risk Assessment of Methylmercury in Fish Technical Data Report (Volume 2, Appendix J, Part 2) indicates that commonly consumed species of fish upstream of the dam site (e.g. rainbow trout, bull trout), could be consumed by the most sensitive age groups (toddlers and children and women of childbearing age) one - two times a week without exceeding Health Canada's Tolerable Daily Intake for methylmercury. Fish species downstream of the dam site (e.g. goldeye, walleye) could be consumed by the most sensitive age groups one time per week and bull trout downstream of the dam site could be consumed two times per week. Comparing these results to reported baseline consumption frequencies of fish caught in the LAA (which indicate a relatively low frequency), the assessment concludes that people will not be required to change the frequency of consumption of fish that are caught from the LAA. This finding took into account results of Aboriginal harvest and consumption studies.

19.4.2 Effects Assessment – Operations – Change in Fishing Opportunities and Practices

Changes in Use of and Access to Fishing Areas During Operations

It is anticipated that access within the Site C reservoir will be temporarily managed for safety and slope stability hazard in the first several years of operation. In the short term, this represents a net loss of access to fishing opportunities for First Nations. BC Hydro's approach to providing reservoir and shoreline access is described in Volume 3 Section 25 Outdoor Recreation and Tourism. The reservoir and shoreline will create new areas for fishing when restrictions are lifted.

BC Hydro will provide three boat launches to provide reservoir access (Volume 3 Appendix E Outdoor Recreation Mitigation Plan). Volume 3 Section 26 Navigation indicates that the reservoir will provide good navigational opportunities to support fishing.

During the operations phase, access will be limited downstream of the dam to sections of the Peace and Pine rivers accessible from the boat launch at Peace Island Park.

Fishing opportunities in the reservoir will resemble opportunities in the Dinosaur Reservoir, with similar species. The reservoir will support more boats than the river does.

New access points to the reservoir and new seasonal opportunities represent both a benefit to Aboriginal groups and an adverse effect. New opportunities for fishing may be created for all fishers, non-Aboriginal and Aboriginal alike. However, those opportunities would take place in a modified landscape that would not resemble the Peace River as it existed before dam construction. In particular, the dam site will fragment the Peace River. The ability of Aboriginal fishers to exploit new seasonal opportunities depends upon the creation and transmission of local knowledge about fishing, a concern expressed directly by Aboriginal groups (See Table 19.1 Key Issues). Fishing requires local, place-responsive knowledge of habitat, species behaviour, gear and technique. It is anticipated that the fish community of the reservoir will undergo change in composition and membership for several decades. In addition, the variable depths of a lake give rise to a need for different fishing technologies, which may be costly. This may mark a change in the ability to access fishing areas and the practice of fishing.

There are indications in the Project-specific TLUS reports that at least some Aboriginal harvesters are fishing at the existing reservoirs, but the use appears to be less intense in comparison with use of the main stem Peace and tributaries. In addition, it is undermined by fears about methylmercury contamination and other perceptions about pollutants.

Where there is a benefit of greater opportunities for the public, this may be experienced by Aboriginal people as an adverse effect of the Project to the extent that they feel their enjoyment of the practice of fishing is reduced.

Changes in Availability of Targeted Species During Operation

According to the effects assessment on fish and fish habitat, the operation phase of the Project may adversely affect some species of fish while benefiting others. These anticipated changes in fish community composition may, in turn, result in a change in the availability of fish species targeted by Aboriginal fishers.

The fish and fish habitat VC states that the operation phase of the Project may result in the following changes to fish and fish habitat, which are relevant to this VC:

- At the end of the construction period the filling of the Site C reservoir would permanently change the aquatic ecosystem (and the areas available for fishing). A new aquatic ecosystem will be created upstream of the dam. The dam will impede upstream and downstream movement and affect fish survival. In particular, fishing use and access would change from a river setting to reservoir setting.
- Fish community modelling indicates an estimated ~~three~~1.8-fold increase in total biomass of harvestable fish in the reservoir relative to baseline conditions in the Peace River. Burbot, lake trout, rainbow trout, walleye, and northern pike are expected to increase, while Arctic grayling, mountain whitefish, and bulltrout are expected to decline
    - In the short term (first 1-10 years), burbot, kokanee, lake whitefish, rainbow trout, and peamouth would enter the newly formed reservoir. Fish adapted to river environments would be impacted, especially Arctic grayling, mountain whitefish, sculpin, and bulltrout.
    - In the medium term (10-30 years), species belonging to the sucker and minnow group would dominate the system. Lake whitefish would become a dominant species while northern pike, present since inundation, may become an important predator in the medium term (its long term success would depend on habitat availability). It is uncertain whether walleye would reside in the reservoir. Lake whitefish and kokanee would compete directly for food sources but kokanee may, over time, become dominant. Lake trout and bull trout may increase over time.
    - In the long term (30 years+), species able to adapt to the reservoir system would settle into their respective roles, which would form the basis of a long-term fish community. Lake whitefish or kokanee will be the dominant group, while top predators will include northern pike, pikeminnow, and burbot. Rainbow trout may be present. (Volume 2 Section 12 Fish and Fish Habitat).
- For a distance downstream of the dam, the operation of the dam and generating station may modify the surface water regime and other characteristics of the river aquatic ecosystem and influence aquatic habitat conditions, ecological productivity and fish community composition
- The species presently found downstream of the proposed Site C dam would continue to be found there following construction; however, their importance and place within the fish community may change
- The water temperature and ice flow regime characteristic of the river below the Peace Canyon Dam will apply to the area below the Site C Dam. The fish community that will form downstream of the Site C Dam is predicted to reflect the community currently downstream of the Peace Canyon Dam. Kokanee and lake trout may establish population distributions immediately downstream of the Site C Dam, as they do with the Peace Canyon Dam.
- Arctic grayling, bull trout, mountain whitefish, and sculpin will be adversely affected, as downstream sediment concentrations during fall or winter will make unusable certain fish habitats characterized by clean rock bed material

- Site C operations may result in ecological conditions that would allow Arctic grayling, bull trout, mountain whitefish, and rainbow trout populations to extend their distribution downstream into Alberta.

While the reservoir may create new opportunities for fishing, the ability of Aboriginal fishers to exploit those opportunities depends upon the creation and transmission of local knowledge about fishing. Fishing requires local, place-responsive knowledge of habitat, species behaviour, gear and technique. As indicated above with respect to the construction phase, it is anticipated that the fish community of the reservoir will undergo change in composition and membership for several decades. Therefore, fishing success would be adversely affected during this time.

Changes in species availability may affect Aboriginal communities at different times after the reservoir has been created. Only BRFN indicated harvesting burbot and kokanee in the LAA, although SFN and BRFN both indicated harvesting rainbow trout (whitefish are indicated by T8TA and BRFN, but it is not clear what kind of whitefish is being harvested). Since these species are predicted to increase in the first ten years of the reservoir, their presence would require adaptation of fishing practices by Aboriginal harvesters.

Changes to the fish community in the reservoir would continue to affect Aboriginal fishing into the medium term. Although jackfish and bulltrout are both harvested by most Aboriginal groups, other species projected to increase are currently only harvested by three First Nations groups: lake trout (T8TA), kokanee (BRFN), and whitefish (T8TA and BRFN). In the long term, all harvesters using the reservoir could be expected to adjust to the predicted dominance of kokanee or whitefish, reported to be harvested by T8TA and BRFN, although the timing of such an adaptation is uncertain.

Changes in the fish community composition throughout the LAA, and the length of time the reservoir and downstream environs takes to reach a stable state supporting a fishery, would affect the success of Aboriginal fishers. Aboriginal fishers may avoid the reservoir and downstream areas until it becomes equally profitable to fish in those locations as it may in an alternate area. The adaptation of a new reservoir fishery may mirror the development of the fish community within the reservoir in terms of the time it takes to adapt.

These effects would be felt by all Aboriginal groups who currently use the LAA and, in particular, by T8TA, BRFN, SFN, and DFN as follows:

- A relative increase in kokanee and lake trout downstream of the dam poses an adaptive challenge to Aboriginal fishing practices, as neither appear to be target species, except where they are indicated by T8TA (lake trout) and BRFN (kokanee)
- A decrease in the availability of bull trout would affect T8TA, SFN, BRFN, and DFN, who indicated harvest of bull trout in TLUS reports
- The movement of a coldwater regime and fish species downstream may affect DFN and HLFN members, who currently favour cool water species such as walleye and jackfish, and may have to shift their harvesting to cold water species, requiring new fishing practices, knowledge, and gear

<u>Changes in Use of Harvested Species During Operation</u>

The changes in use of harvested species would carry over from construction.

19.4.3 Mitigation Measures – Change in Fishing Opportunities and Practices

Mitigation measures to address potential adverse Project effects on current fishing opportunities and practices will be achieved through the following commitments. It should be noted that the approach to identifying additional mitigation measures for this section and throughout relevant sections of the EIS will include consultations with Aboriginal ~~-~~groups:

- ~~Consult with Aboriginal groups respecting the d~~Consider developing~~ment of~~ fish habitat compensation projects that align with BC Hydro compensation programs
- ~~Seek input from Aboriginal groups respecting mitigation strategies~~
- ~~Continue to consult with Aboriginal groups on clearing plans and protocols~~
- Develop a communications program to inform harvesters of planned or unplanned events related to construction activities that may affect fishing opportunities or access
- Develop a communications program to inform harvesters of longer-term changes in fish community composition
- Implement all mitigation measures set out in Volume 2 Section 12 Fish and Fish Habitat.
- Implement measures supporting the development of 3 boat launches along the Site C reservoir accessible via Highway 29 to support navigability and navigable use, and the re-establishment of recreational sites on the Site C reservoir and downstream, and to re-establish and create new use patterns and access, as set out in Volume 3 Section 26 Navigation

19.4.4 Effects Assessment – Change in Hunting and Trapping Opportunities and Practices During Construction and Operations

The Project has the potential to affect a current use of lands and resources, traditional hunting, by reducing the hunting and trapping opportunities of Aboriginal groups. Aboriginal groups who submitted TLU studies have indicated that hunting is a primary activity.

The location of the hunting activity is identified in the discussion of use of and access to hunting rather than as a separate indicator. Potential project effects on hunting and non-tenured or subsistence trapping opportunities and practices are discussed at the Project component level, rather than the activity level, for this VC. An exception is made when more detailed information on either current use or biophysical effects allows for an analysis of activity-level interactions.

During the construction phase, the Project may affect hunting and non-tenured or subsistence trapping opportunities and practices through changes to access, wildlife habitat alteration and fragmentation, disturbance and/or displacement of wildlife resources, and direct or indirect mortality of animals.

Potential effects on wildlife are detailed in Volume 2 Section 14 Wildlife Resources, which assesses potential Project effects on wildlife resources within the wildlife resources Local Assessment Area (LAA). Key indicator groups for the wildlife assessment were selected based in part on “[A]boriginal concerns of effects to biodiversity, loss of habitat, changes in animal populations and their distribution, and effects to traditional land uses practices.” As a result, there is considerable overlap between the key indicator groups used in Volume 2 Section 14 (Table 14.3, Key

indicators for wildlife resources) and species reported as currently harvested species in Traditional Land Use studies (Tables 19.5 to 19.10). The following species are commonly referenced in TLUS and were also used as indicator groups in Volume 2 Section 14 Wildlife Resources:

- Bald Eagles (raptors)
- Sharp-tailed (non-migratory game birds)
- Ruffed Grouse (non-migratory game birds)
- Fisher (fur-bearers)
- Beaver (fur-bearers)
- Moose (ungulates)
- Elk (ungulates)
- Mule deer (ungulates)
- White-tailed deer (ungulates)

The following effects assessment of changes to hunting and non-tenured or subsistence trapping opportunities and practices focuses on these species.

<u>Changes in Use of and Access to Hunting Areas During Construction</u>

Assessment of potential Project effects on the ability of Aboriginal harvesters to access hunting areas during construction are brought into this VC from Volume 3 Section 26 Navigation, Volume 1 Section 4 Project Description, and Volume 3 Section 24 Harvest of Fish and Wildlife Resources. Although Volume 3 Section 24 addresses public hunting and tenured trapping (including Aboriginal tenured traplines), rather than Aboriginal hunting, its findings are relevant here.

Alterations in access that may affect Aboriginal harvesting would involve both changes to navigation on the Peace River and its tributaries as well as changes to access roads in the Project area. Access-related changes to hunting and non-tenured or subsistence trapping opportunities and practices include the following:

- restrictions due to construction activities would reduce access to and use of hunting opportunities and areas during construction.
    - Access would be restricted within the Project activity zone, including the Site C dam site and off-site construction materials locations.
    - As defined by existing regulations governing the use of firearms, hunting within Project work areas such as the Project access road, Highway 29 realignment corridors, and reservoir vegetation clearing areas will be restricted.
    - Restrictions on use for safety and slope stability reasons (described in Section 2.4.11) during reservoir construction and inundation will affect access and use of hunting areas along the Peace River during construction.

The Project will alter the existing access network utilized by Aboriginal and non-Aboriginal hunters to harvest wildlife resources. The Project would affect the ability of Aboriginal hunters to use existing access networks such as the Peace River in the

area of the Project (which is used as a transportation route as indicated by both T8TA and SFN).

Water-based navigation will be restricted in the area of the Project dam site at the beginning of the construction phase. Areas both up and downstream of this restricted area will remain navigable, and may be accessed from boat launches at Lynx Creek, Halfway River, and Hudson's Hope in the beginning of the construction phase.

Opportunities to access the river will be temporarily reduced when construction activities close the Hudson's Hope boat launch in Year 5. With inundation, all existing boat launches including Halfway River, Lynx Creek would become permanently unavailable. Until new boat launches are opened for use on the reservoir, there would be an adverse effect on access to water-based navigation.

Downstream of the dam, the Pine River would be unaffected.

Although provision of access and navigation downstream of the dam site will be unaffected during construction, harvesters who are accustomed to using the Peace River as a transportation corridor between the Peace Canyon Dam and stretches downstream of Fort St. John will have to transport their boats around the dam site.

Construction activities will create a new temporary road access network that may be used by all hunters, and poachers, to access wildlife. New temporary construction access will include the following linear features:

- Approximately 23 km of all-season clearing roads along the Site C reservoir and construction sites
- Approximately 113 km of winter clearing roads
- Temporary spans to access islands for clearing activities

Increased access during construction represents both a benefit and an adverse effect to Aboriginal hunters in the LAA. It opens up previously inaccessible areas to Aboriginal harvesting, but also to increased competition from other hunters, and poaching. Volume 3 Section 24.4.7, Table 24.18 describes the potential change in public use of harvesting areas due to direct, indirect, and induced population changes during construction, attributable to the Project. The number of hunting licence holders in the Peace Region in 2007 (latest year available) was 8,659, or approximately 14% of the population of the Peace River Regional District. The Project may result in an increase in the number of licensed hunters by 265 by Year 5 of construction or an average of 44 new hunters per year; 265 hunters represents 3% of the baseline number of hunters. After Year 5 of construction, Project induced demand for hunting licences would be expected to decrease annually until a return to base case conditions as Project construction employment declines.

According to Volume 1 Section 4 Project Description, these roads will be reclaimed or inundated after clearing. In the consideration of public hunting, Volume 3, Section 24 indicates that these roads could be used by hunters to access formerly inaccessible areas within the LAA. However, this effect will only be temporary.

There is no predicted change in use of and access to hunting resulting from Wuthrich Quarry. The construction of Portage Quarry may affect T8TA's hunting opportunities; they have identified subsistence values (moose and deer) and an environmental area

near the site. The West Pine Quarry may affect the use of lands for hunting of HLFN, who identified two moose hunting sites in the area.

Changes in Use of and Access to Hunting Areas During Operation

Section 3 Volume 24 Harvest of Fish and Wildlife Resources notes that when the reservoir is open to public boat and recreational traffic – after the first several years of operation – areas that had been inaccessible to hunting (sport and Aboriginal) during the construction phase will become accessible again, although areas near the dam and the Moberly Reach may be restricted for longer periods due to slope stability concerns.

BC Hydro will provide three boat launches to provide reservoir access (Volume 3 Appendix E Outdoor Recreation Mitigation Plan). Volume 3 Section 26 Navigation

indicates that the reservoir will provide good navigational opportunities to support harvesting and recreation.

Changes in Availability of Targeted Species During Construction and Operation

The assessment of changes in availability of targeted species draws on the relevant effects assessment in Section 2 Volume 14 Wildlife Resources and it follows Section 2 Volume 14 in treating construction and operation phases together.

Section 2 Volume 14 Wildlife Resources describes the following potential effects on key indicators that are relevant to the current use of lands for hunting and non-tenured or subsistence trapping by Aboriginal persons.

- Habitat alteration—defined in Section 2 Volume 14 as the "permanent removal or loss of habitat or a reduction in habitat suitability for a species"
- Disturbance and displacement—defined as "activities that cause individuals to alter their behaviour or avoid habitats that are otherwise suitable." These may include construction noise and close proximity of people and machinery to suitable habitats.
- Mortality—Associated with "the alteration of habitats due to construction activities, flooding—including construction headpond flooding, and the deleterious release of substances." Mortality also includes animals hunted, poached, hit by vehicles, or lost during infilling of the reservoir.

Of these three key aspects, Section 2 Volume 14 Wildlife Resources predicts that habitat alteration would be the "primary effect on wildlife resources". Consequently, habitat alteration is the most relevant to an assessment of potential Project effects on current use of lands and resources with respect to opportunities and practices for hunting and trapping. Construction phase activities have the potential to induce habitat alteration and fragmentation through site clearing and preparation and other activities that will be undertaken to construct the dam generating station and spillways, reservoir, transmission line, Highway 29 realignment, and construction of access roads. According to Volume 2 Section 14 Wildlife Resources, most of the effects of the Project on wildlife resources will occur during the construction phase.

Wildfowl, Upland Birds and Other Birds

Waterfowl (migratory birds) would be affected by construction activities through the loss of habitat due to alteration and fragmentation, disturbance and displacement, and mortality, mostly through transformation of the river into a reservoir. Ice formation patterns in the future reservoir will change staging areas for some species. The assemblages of waterfowl are predicted to change.

Waterfowl hunting is indicated within the LAA by SFN and, to a lesser extent, by BRFN (grebes included) and DTFN. One waterfowl site reported by BRFN members, at the mouth of Wilder Creek, is within the inundation zone and will be affected, first by access restrictions after Year 1, and afterward by reservoir creation. Waterfowl hunting by SFN members at Boucher Lake, Monias Lake, and around Boudreau Lakes would not be affected by the Project, as the adverse residual effects described for migratory waterfowl in 14.5.1.1.3 are specific to waterfowl in the reservoir. However, duck hunting by SFN members on the Lower Moberly will be affected by creation of the reservoir. Pintail duck hunting sites on the Peace River will be inundated, and goose hunting locations on the Peace River below Hudson's Hope will be lost.

T8TA has indicated some wildfowl hunting in the LAA but has not supplied specific information to allow for an assessment of potential effects.

Sharp-tailed Grouse and Ruffed Grouse (non-migratory game birds) would be affected by loss of habitat, habitat fragmentation, disturbance and displacement via construction activities, direct and indirect mortality (construction activities, flooding, equipment and vehicle collisions), and potentially increased hunting. Noise and physical disturbance from construction and operation activities have the potential to disturb or displace Grouse. However, it is anticipated that residual effects on non-migratory game birds will dissipate with time.

Changes in the availability of the two indicator Grouse species may affect members of the SFN and T8TA at least during construction, who indicated harvesting them within the LAA. BRFN indicates that Grouse is harvested opportunistically, as part of larger ungulate hunting efforts, but no specific areas within the LAA are given.

Grouse hunting by SFN members may be affected within the LAA at Boucher Lake and Monias Lake by increased access and competition. Other areas on Moberly Lake, for instance, would not be affected. Grouse hunting by T8TA members at several sites within the LAA may also be affected, along the transmission route and near the dam site.

Small Game and Furbearers

Fisher will be affected by the construction of the Project. Construction will result in the removal of 14% of the suitable denning area for fishers within the LAA. Land clearing within the reservoir will displace animals out of their home ranges. Direct mortality may occur during vegetation clearing as fishers are cavity dwellers. However, Volume 2 Section 14 Wildlife Resources states that no significant residual effects to fisher are expected as a result of the Project. There will be no adverse effect on Aboriginal current use of lands and resources for hunting and trapping fisher.

Beaver will be displaced during reservoir clearing, flooding during Stage 1 and Stage 2 construction, and reservoir filling. More than 60 beaver lodges will be lost along the Peace and its tributaries during construction activities and filling of the reservoir. Removal of riparian vegetation may decrease food prior to inundation. It is anticipated that beavers will recolonize the reservoir area during the operation period.

Loss of furbearers and small game could affect Aboriginal harvesters who have indicated current use overlapping the LAA, including SFN and T8TA members. However, these effects would be confined to the construction period. In addition, other harvesting areas are identified outside the LAA.

SFN currently harvest a number of small game and furbearing animals contiguous with the LAA along the Moberly River, the Pine River, and around Boucher Lake which may be affected, including beaver, marten, wolves, squirrel, muskrat, weasel, coyote, jackfish, mink, wolverine, and fox. For these species, additional harvesting areas are identified outside the LAA.

Depending on their exact location, several small game sites indicated by T8TA members in the LAA would be affected by Highway 29 realignment or inundation of the reservoir, including two beaver harvesting sites and one marten harvesting site near Bear Flats.

Ungulates

Loss of habitat is predicted to affect ungulates in the LAA, principally through a projected loss of winter areas, or disturbance during winter. Ungulates includes moose, elk, mule and whitetail deer (caribou were excluded from the wildlife resources assessment; see Volume 2 Section 14 Table 14.2 Rationale for the Exclusion of Suggested Species). Adult ungulates are highly mobile, and it is anticipated that the Project may induce some movement of ungulates away from the Project area. Construction activities may induce direct and indirect mortality. It is anticipated that new access roads will reduce suitable habitat and food sources for ungulates, fragment their habitat, and lead to direct mortalities through vehicular collisions. While these effects are anticipated to occur during construction, no significant residual effects to ungulates as a result of the Project are predicted (Volume 2 Section 14 Wildlife Resources).

Changes in ungulate availability could affect the current use of lands and resources for hunting by Aboriginal groups who report harvesting in the area. There will be no change in white-tail deer. Elk will continue to increase without a large change, mule deer numbers will vary based on winter severity but the Project won't affect numbers. Moose may see a decline of 5% in population due to the Project.

Temporary reduction to moose availability in the LAA would affect reported harvesting in the area. Moose and elk are harvested by members of the SFN, T8TA, BRFN, DTFN, DFN, and HLFN. SFN and BRFN, and the T8TA members harvest deer. BRFN members reported that the vicinity of the Project is a preferred hunting area, and indicated several extensions of their hunting areas in the LAA that would be affected by reductions in moose, elk, and deer availability. However, the maps included in their Traditional Land Use study, depict the majority of their indicated hunting areas are north of the LAA in the watersheds of tributaries of the Peace.

SFN's current use of hunting for moose, mule-deer, and elk in the southwestern portion of the LAA would be affected by changes in ungulate distribution, while their current use of hunting in the Monias and Boucher Lake areas may be affected by increased access and/or competition. Moose is the main ungulate species harvested.

T8TA members' harvest of moose, deer, and elk may be affected at hunting locations within the LAA. Areas in the path of the future transmission line (moose) near the Peace Canyon Dam would be affected by increased access and competition from non-Aboriginal hunters. Areas on the north shore of the Peace River at Lynx Creek (white-tailed and mule deer), on opposite banks between Farrell Creek and the Halfway River (deer and moose), along the north bank near the mouth of the Red/Cache Creek (moose, elk, and deer) would be directly affected by inundation. Areas on the south side of the Peace River near Taylor (moose) are outside the inundation zone and could be affected by changes to downstream flows. Harvesting at other indicated ungulate locations between the south bank of the Peace River and the transmission line may be affected by increased access and competition by non-Aboriginal hunters. However, T8TA has identified in its TLUS additional moose hunting areas that lie outside the LAA.

The current use of lands and resources for hunting may be affected by reductions in moose populations in the LAA for DFN, HLFN, and DTFN. However, TLUS evidence provided by these First Nations indicates that their core moose hunting territories lie outside the LAA.

Large Carnivores

Volume 2 Section 14 Wildlife Resources anticipates that the Project will not affect large carnivores (grizzly bear and grey wolf) or hunting of these resources.

SFN members' black bear hunting, which is indicated to occur in the southwestern portion of the LAA, and in and around Moberly, Boucher, and Monias lakes (Monias is also indicated for one brown bear harvesting site), will not be directly affected. However, the transmission line may permit easier access to the Boucher Lake area. T8TA has indicated one bear harvesting location at the mouth of the Red/Cache Creek, within the inundation zone. Grizzly bear are not harvested in the LAA.

19.4.5 Mitigation Measures – Change in Hunting and Trapping Opportunities and Practices During Construction and Operations

Mitigation measures to address potential adverse Project effects on current hunting and trapping ~~fishing~~ opportunities and practices will be achieved through the following commitments:

- ~~Consult with Aboriginal groups respecting the~~Consider developing~~ment of~~ wildlife habitat compensation projects that align with BC Hydro compensation programs
- ~~Seek input from Aboriginal groups respecting mitigation strategies, such as~~Develop mitigation measures ~~related~~intended to decrease impacts on First Nation trap lines in the Project activity zone
- ~~Continue to consult with Aboriginal groups on clearing plans and protocols~~
- Develop a communications program to inform harvesters of planned or unplanned events related to construction activities that may affect hunting opportunities or access
- Implement all mitigation measures set out in Volume 2 Section 14 Wildlife Resources
- Implement all mitigation measures set out in Volume 3 Section 24 Harvest of Fish and Wildlife Resources pertaining to trapping

19.4.6 Effects Assessment – Change in Cultural and Traditional Uses of the Land

Potential Project effects on other cultural and traditional uses of the land – including practices, features, and traditional values that have not been addressed within this VC under the indicators for hunting, trapping, and fishing – are discussed at the Project component level, rather than the activity level. As with the other indicators, an exception is made when information allows for an analysis of activity-level interactions.

SFN, T8TA, BRFN, DTFN, DFN and HLFN have reported other cultural and traditional uses of the land including place names, habitation sites (cabins and less permanent camps), gathering places, teaching areas, drinking water, feather-gathering sites, firewood, trails and water routes, berries and other food plants (see Tables 19.9 and 19.10).

Several other Aboriginal groups, including KLMSS, MNBC and MLIB have indicated use of the Peace River valley in a general sense, but have not provided sufficient specific information on use within the LAA to enable an effects assessment. MLIB is undertaking a traditional use study for the Project. The results of the study will be considered and

incorporated into the EIS, where appropriate, during the EIS review phase. Consultation and engagement activities with other Aboriginal groups are also on-going.

Ceremonial and sacred areas, medicinal plant gathering sites, burial sites, and other places reportedly of spiritual or cultural use importance were described to BC Hydro, but not always with geographic precision. T8TA's TLUS report, for example, combines these features and values (medicinal plant gathering place, burial sites, cultural place, spiritual places) into a single class of site for reasons of confidentiality on the accompanying TLUS maps, such that the location or nature of the site is unidentified (see Volume 5 Appendix A06 Part 5, Maps W2 and E2 Cultural Use Study Results).

Many of the resources described in this section are used for food, medicine, water, transient or longer-term shelter, warmth, and transportation. Although potential changes in their use or availability that may be induced by the Project are assessed individually, taken together they are all part of an infrastructure that supports the central current use activities of fishing, hunting, and trapping, described in Section 19.3).

Aboriginal groups have conveyed to BC Hydro – in TLUS reports, other studies, and in consultation – that there are certain places, or in a broader sense, landscapes, within the Current Use of Lands and Resources for Traditional Purposes LAA (fish and fish habitat and wildlife resources LAAs) that should be assessed paying particular attention to the multiplicity of uses taking place there, the importance of those uses as described by community members, and the depth of individual and community attachment to them. Potential changes to culturally important places and valued landscapes are assessed below for the construction and operation phases of the Project.

Changes in Other Cultural and Traditional Uses of the Land During Construction

Burial Sites

The locations of two burial sites reported by T8TA at Attachie and Bear Flats would likely be affected by clearing activities during construction of the Highway 29 realignment, and would eventually be submerged when the reservoir is filled. The burial sites are associated in Treaty 8 oral history with the 1919 flu epidemic: the grave of Chief Attachie is reported to be on the south facing slope at Attachie, while the valley bottom downstream of Bear Flats is also reported to be a burial location. Multiple burials are also reported to be at Halfway River, although no specific locations are given. No physical indications of burial sites have been found at these locations (Volume 4 Section 32 Heritage Resources Effects Assessment); however, an oral tradition about burial sites may be of cultural heritage value, and would be changed by the Project. It is uncertain how Aboriginal community members will respond to the submergence of the areas believed, traditionally, to hold graves belonging to their ancestors.

BRFN have also identified, in their TLUS, Attachie as an important burial ground. One BRFN member talked of the potential for burials throughout the Peace River valley because "that's where the old-timer Beaver Indians used to be." The information is geographically broad and does not allow for an assessment of the Project's effects.

SFN has indicated the location of a burial ground area in the general vicinity of Hudson's Hope, however, the information is geographically broad and does not allow for an assessment of the Project's effects.

Habitation Sites (Cabins and Campsites)

BRFN, SFN, and T8TA have identified cabins and campsites within the LAA. Locations of both permanent and transient habitations are indicated as strung along the north shore of the Peace River at Farrell Creek, Lynx Creek, Halfway River, Bear Flat and Cache Creek, and on both sides of the river at Hudson's Hope. There are smaller concentrations on the north shore of the Peace River opposite Moberly River, at Fort St. John Historic Park and at Taylor.

Areas that include six camp sites within the LAA used for hunting, fishing, and recreational camping by BRFN members may be altered during construction by clearing activities, and then submerged during inundation. Five are reported on the north side of the Peace River – one at Bear Flats, one on the lower Halfway River; two between Halfway River and Farrell Creek; and one on lower Farrell Creek. The habitation values reported by BRFN are not permanent structures, but sites for transient camping.

SFN made 11 references to cabins located in the LAA to the south and east of Boucher Lake. It appears that these cabins will not be directly affected by the Project; however, temporary changes in availability of wildlife resources during construction may temporarily alter their utility and function for hunting, trapping, and fishing.

Seventy-nine campsite values were identified by SFN within the LAA; this does not refer to specific individual sites, and may refer to multiple references to the same or related sites:

- Campsites along the Peace River at the confluence with the Moberly, on the north side of the Peace River to the southwest and northeast of Attachie, and on the south side of the Peace River opposite Attachie, would be cleared during construction and covered by the rising reservoir during inundation
- Campsites on the north side of the Pine River near its confluence with the Peace, near Monias Lake, and through the eastern end of the transmission line right-of-way, would not be affected
- Two “day camps,” which is not defined, identified by SFN – one south of Boucher Lake near transmission line works, and another near Monias Lake – would not be adversely affected
- Day camps identified along both sides of the Peace River between Dinosaur Lake and Attachie appear to be within the inundation zone of the reservoir

Of the136 habitation use values depicted by T8TA within the LAA— including 59 gathering places, 53 temporary habitations, and 24 permanent habitations—most appear to be within the area of the river valley that will be transformed into a reservoir, including those along the north shore of the Peace at Farrell Creek, Lynx Creek, Halfway River, Bear Flats and Cache Creek, and on both sides of the river at Hudson's Hope. Smaller concentrations on the north shore of the Peace opposite Moberly River, at Fort St. John Historic Park and at Taylor will be affected by access restrictions in the area of the proposed dam site, to be implemented in the first year of construction.

HLFN indicates 20 overnight sites within the LAA, including in the area of Taylor/Fort St. John. However, it is not possible to determine on the basis of the maps provided whether the sites will be adversely affected by the Project.

A Treaty 8 elder and youth culture camp is held at Bear Flats campground. This site and its importance are discussed below under “cultural and spiritual places”.

Drinking water

T8TA has described water as a sacred resource, and indicated the presence of several freshwater sources within the LAA. Two natural water springs identified southwest of Bear Flats and four drinking water sources—one at the mouth of Moberly Creek, one west of Bear Flats and two at Hudson’s Hope—sit in areas that will be submerged by the inundation of the reservoir.

Firewood

Clearing and subsequent inundation of the reservoir will flood an area that SFN members indicate they use for tree harvest, between Attachie and the Peace Canyon Dam on the north shore of the Peace River. One additional tree harvesting area near Boucher Lake, and one nearby hay harvesting site, appears to be on the route of the proposed transmission line.

Two firewood harvesting areas depicted by T8TA at Bear Flats and another two locations between Farrell Creek and Halfway River will be cleared and inundated.

Eagle Feathers

Saulteau and T8TA have indicated that they harvest eagle feathers. Of 59 bald eagle nests observed in field studies conducted for the assessment in Volume 2 Section 14 Wildlife Resources, 32 will be removed as a result of the Project. Bald Eagle gathering locations identified by SFN within the LAA on the Peace River between the Pine and Moberly rivers may be affected by clearing for the transmission line. Depending on their location, Golden Eagle sites to the north of the Peace River along Highway 29 and sites along the proposed transmission could be affected by clearing and construction activities. T8TA also identified two feather-gathering sites within the LAA that may be affected.

Trails and Water Routes

SFN identified 22 trails in the LAA. Trails located in the area to the south of Boucher Lake, and to the south and west of Monias Lake will not be affected by the Project and will continue to support transportation and access to land use features. Trails indicated near the mouth of the Moberly River and at two locations on the south side of the Peace River would be affected by construction clearing and inundation.

T8TA’s TLUS report identifies 30 transportation values within the Project footprint and flood zone including: portions of trails, horse crossings, raft or boat crossings and water routes by and for canoe and motorboat. Portions of these trails or routes that cross the river in its flood zone will be disrupted. Several other transportation and boat routes along the Peace will be flooded.

Transportation lines running along the Halfway River from its mouth to Halfway River Reserve 168 will not be adversely affected by the Project. Transportation lines depicted within the Peace River itself will be submerged and fragmented by the dam site.

Cultural and Spiritual Places

Ceremonial and sacred areas and other places, reportedly of spiritual or cultural use importance, including teaching and gathering sites, were described to BC Hydro by

T8TA, but not always with geographic precision. T8TA's TLUS, for example, combines these features and values into a single class of site on the accompanying TLUS maps. For reasons of confidentiality the location and nature of the site are unidentified. Map W2 and E2 Cultural Use Study maps, Volume 5 Appendix A06 Part 5). These sites are discussed in greater detail in Section 19.4. Within the wildlife resources LAA, T8TA has described 76 cultural use values, including 44 buffered, or redacted, data areas, 12 place names, and 9 teaching areas. These do not necessarily refer to different sites, but may indicate multiple memories or references to the same site(s).

T8TA indicates gathering places and teaching areas at Coffee Pot, Lynx Creek, Dry Creek, Farrell Creek, Attachie, Bear Flats, near the Moberly River confluence, and near the Fort St. John Historical Site. They also identified sites of cultural and spiritual sites in areas outside the LAA, including the Twin Sisters area.

BRFN identified a spiritual site at Attachie. In addition, through consultation with BC Hydro, BRFN representatives indicated that Dancing Grounds is considered a sacred site, and expressed interest in protecting the land from future development. Dancing Grounds would not be affected by the Project as it is a far distance from the boundaries of the LAA.

Other distant but highly valued cultural and spiritual sites include Pink Mountain, Muskwa Kechika (BRFN and T8TA), K'ih tsaa?dza Tribal Park (T8TA), the Crying Girl Prairie, the Twin Sisters, and the Peace Moberly Tract (T8TA, SFN), among others.

SFN indicates that summer camping creates an opportunity to transfer traditional knowledge from old to young. While engaging in traditional activities, SFN youth learn about SFN language, culture, and how to process meat, berries and medicines. This function will be affected by the Project insofar as camping opportunities will be reduced by the construction and operation of the Project.

Bear Flats is reported to be an area used for gathering and teaching for T8TA. Elders camps, Youth and Elders camps, and Treaty 8 meetings are held at the Bear Flats campground, which is above the Site C maximum normal reservoir level, but within the reservoir impact lines. A portion of the property would be directly affected by the highway realignment at Cache Creek. The Nenan Dane-zaa Deh Zona Child and Family Services Society (NENAN) holds an annual Youth and Elders gathering at the campground. According to NENAN, the Bear Flats area was chosen due to its "profound significance as Treaty 8 people have gathered, camped, hunted, and practiced ceremony here since time immemorial". The T8TA, BRFN and SFN also reported the importance of holding the event at Bear Flats. (T8FNs Community Assessment Team and The Firelight Group Research Cooperative 2012). The effects to the Bear Flats campground are further discussed in Volume 3 Section 24 Harvest of Fish and Wildlife Resources.

The areas described above are spaces to transfer traditional knowledge, a key factor in cultural retention.

Berries, Herbs, and Medicinal Plants

Effects on opportunities and practices to harvest resources for traditional purposes are assessed based on information reported in Traditional Land Use studies provided to BC Hydro and on the biophysical effects described in Volume 2 Section 13 Vegetation and Ecological Communities. While Volume 2 Section 13 does not assess effects on individual plant species or plants reported in TLUS reports to be used by Aboriginal people for traditional purposes, it reports all terrestrial ecosystems within the Vegetation

and Ecological Communities LAA and assesses effects to those that are vulnerable to environmental effects of the Project, including rare plants and rare and sensitive communities. Sensitive communities encompass grasslands, wetlands, old-growth forest, marl fens and tufa seeps – some of which are known to have occurrences of plants harvested by Aboriginal people. By extension, the interactions and effects described in Volume 2 ecosystems can be used to inform this indicator.

Volume 2 Section 13 indicates that there is an increased potential for adverse effects on terrestrial ecosystems, and that rare plants would be adversely affected during the construction phase of the Project. Based on the effects described in Volume 2 Section 13, it is reasonable to expect that the following effect pathways would also apply to specific plants, berries, trees, bushes and water used by Aboriginal people within the LAA for this VC:

- Clearing of vegetation and grubbing during site preparation for the reservoir, dam site, new roads and transmission line would be the primary project activities resulting in habitat alteration during the early stages of construction
- Water diversion associated with dam construction has the potential to change flow regimes on the Peace River (see Volume 2 Section 11.4 Surface Water Regime for more details), which may affect occurrences of plants along the river margins
- In the final stages of construction, reservoir filling would affect terrestrial ecosystems and rare plants through inundation of existing habitats. Occurrences within the proposed reservoir would be inundated, while those near the new shoreline could experience changes to their supporting habitats.
- Clearing activities also have the potential to affect plants and habitat through a number of mechanisms, including contamination from herbicide, road salt, silt or accidental spills of industrial fluids; and changes to hydrologic regimes—drying of wetlands, flooding of uplands—due to vegetation clearing, road building, and ground disturbance
- Nearly half of the 63.7 km of the construction of new permanent road is associated with access to the south along an extension of the Jackfish Lake Road. This new segment will be built adjacent to the existing corridor for the transmission line and railway. It passes through a variety of terrestrial habitats, including wetlands in the eastern portion of the transmission line corridor as it approaches the dam site.
- Tower placement and line stringing activities related to construction of the transmission line could affect existing rare plant occurrences and potential habitat both directly (trampling, hydrologic modification, etc.) and indirectly (increased invasive species potential, increased dust deposition, etc.). The level of effect depends on where the activities occur.

T8TA, BRFN, DFN, DTFN, and SFN reported harvesting berries in the LAA. Multiple harvesting locations were reported along the Peace River at the proposed dam site (T8TA), at the Lynx Creek confluence (T8TA), near Hudson's Hope (T8TA) and at Bear Flats (BRFN, T8TA) and Attachie (T8TA), where hunting, trapping and fishing are also practiced. These sites would be inundated. DTFN has reported harvesting berries at the junction of Flatrock Creek and the Peace River, downstream from the dam site. Project construction is not likely to have effects on berries downstream of the dam site.

There is a concentration of berry harvesting activity in the area south of Boucher Lake (SFN, T8TA). This area, depending on the exact location, may be altered or lost during clearing of the transmission line Right of Way or tower placement.

DFN indicated that there are plant and earth gathering sites east of Halfway River, however, there is not enough detail to determine whether the Project would overlap spatially with the harvesting sites (see Volume 5 Appendix A07, Plant and Earth Gathering Sites).

Multiple locations for harvesting herbs and medicinal plants were reported by First Nations. BRFN reported that the banks of the Halfway River are important for harvesting mint and Labrador tea. However, there is not enough detail in the TLUS maps to determine whether the Project would overlap spatially with the harvesting sites.

Similarly, T8TA indicated medicinal plant use throughout the Peace River between Fort St. John and Hudson's Hope; however, the location of the areas has not been provided in sufficient detail to allow for an assessment of likely Project interactions. One medicinal plant habitat area is depicted on the north shore of the Peace River opposite the confluence with the Moberly River. Part of this harvesting area would be inundated.

SFN reported that Boucher Lake is an area of importance with multiple plant species harvested, including Labrador tea and rat root. This area, depending on the exact location, may be altered or lost during clearing of the transmission line Right of Way or tower placement.

Changes in Other Cultural and Traditional Uses of the Land During Operations

It is anticipated that the effects on other cultural and traditional uses of the land induced during construction would continue during the Operations Phase.

As is the case for the rare plants assessed in Section 2 Volume 13 Vegetation and Ecological Communities, berries, trees, medicinal plants and other resources identified above may survive clearing and potentially re-establish themselves.

The Project will affect the opportunities for T8TA, SFN, BRFN and DFN to continue to harvest plants and berries in the LAA. While in some cases, it may be possible for members of these First Nations to find alternate harvesting areas, these may be farther afield relative to their current travel distance, more costly to access, or less abundant. As a result, harvesting success may be reduced.

The operation of the dam is also expected to result in changes to the downstream hydrologic regime along the Peace River from the Project tailrace to the Pine River confluence. However, Volume 2 Section 13 Vegetation and Ecological Communities reports that it is not clear how these changes would affect rare plants and, by extension it is difficult to predict effects on the plants used by Aboriginal people.

The Project is expected to remove or alter ecosystems where food and medicinal plants, and berries and other resources used by Aboriginal groups grow. As is the case for the rare plants assessed in Section 2 Volume 13 Vegetation and Ecological Communities, berries, trees, medicinal plants and other resources identified above may survive clearing and re-establish themselves in the new environment. There is some uncertainty surrounding the fate of the resources discussed in this section outside of those areas that will be lost to the filling of the reservoir

In areas where clearing has occurred, but plants and berries remain, perceived or real effects on the quality and safety of the foods may limit the availability of desirable harvesting locations and the desire to gather and consume the resources.

Clearing of the Right of Way for the transmission line may destroy resources that are currently used by Aboriginal people at Boucher Lake. As there is already access to Boucher Lake, Right of Way clearing is not expected to induce a noticeable increase in harvesters in the area.

Changes in Use of and Access to Culturally Important Places and Valued Landscapes During Construction

Aboriginal groups have encouraged BC Hydro to look beyond the Project's interactions with individual land uses in isolation from one another in order to examine the Project's effects on highly valued, multi-use, culturally and historically important places or areas.

As noted in Subsection 19.3, Aboriginal communities have indicated that they place a high value on certain places or landscapes within the LAA. These observations are quantified in Table 19.11, which describes the places identified by Aboriginal groups, and the multiplicity of uses and users that they host. While there are individual sites and small concentrations of sites strung along the length of the Peace River within the LAA, the cultural use areas demonstrating the most density of use and purpose, as evidenced in TLUS studies and consultation, are patterned along the Peace River with a higher concentration at stream confluences on the north shore. Many of these places have an Aboriginal place name, indicative of a high historical and cultural association. Based on this information and on the reported high value Aboriginal groups attach to them, the following places suggest that they have the highest special importance:

- Attachie (atachii) (T8TA 2012)
- Bear Flats (sas tluuge?) (T8TA 2012)
- Farrell Creek

The following places are also reported to have a high cultural value, and multiple current uses are indicated for each:

- Bull Flats
- Coffee Pot
- Hudson's Hope (near Maurice Creek)
- Lynx Creek
- Dry Creek
- Between Farrell Creek and the Site of Farrell
- Moberly River to Fort St. John Historical site
- Fort St. John Historical Site

The above noted places are along the Peace River would be inundated by the reservoir. The sites are generally a mixture of fee simple land, parcels owned by BC Hydro and Crown land. In the Attachie, Bear Flats, and Farrell Creek areas, the locations that appear to have the highest special importance, on average more than 80% of the lands are either owned in fee simple or by BC Hydro. However, the general nature of the site

descriptions from Aboriginal groups makes precise calculations difficult. It is possible that, following inundation and the establishment of new access within the reservoir, that old patterns of Aboriginal use may be reconstituted at new confluences of the Halfway River (Attachie) and the Peace River and Cache Creek (Bear Flats) with the reservoir, which will occur farther upstream from their present confluences with the Peace. However, the success of such an adaptation would require the return of conditions supporting both current use activities and conditions supporting broader cultural aims (teaching, ceremony, and other cultural uses).

There are several other places indicated as high value, multi-use places within the LAA that will not be affected by inundation, including the Taylor confluence below the Site C dam (indicated for use by DFN, SFN, and HLFN).

Multiple uses are also reported at Monias Lake, Boudreau Lake and Boucher Lake. However, these sites are outside the flood zone, and the multiplicity of uses they host tend toward current use activities—hunting, fishing, trapping—without the emphasis on cultural and/or spiritual uses coupled with oral historical traditions that are attached to highly valued places along the Peace River.

Changes in Use of and Access to Culturally Important Places and Valued Landscapes During Operations

It is anticipated that the effects during construction on use of and access to culturally important places and valued landscapes would continue during the operations phase, as all the places indicated on banks of the Peace River will be inundated. It is possible that other gathering places may be reconstituted at the confluences of the old creeks and the new lake. It is also possible that Aboriginal harvesters will shift their attention outside the area of the Project to other special places within their territories.

Table 19.11 Culturally Important Places and Valued Landscapes

Place Name	Landscape Feature	Current Uses	First Nations	Reported Cultural Values	Interaction
Bull Flats	Bull Run Creek, north and south of dam	Fishing, hunting, feather gathering, temporary habitation	Blueberry River First Nations Dene Tha' First Nation Duncan's First Nation Horse Lake First Nation Saulteau First Nations Treaty 8 Tribal Association	Cultural areas Place name Feather gathering	Inundation
		Fishing	Blueberry River First Nation		
		Harvesting	Saulteau First Nation		
Coffee Pot	Peace River, The Coffee Pot, large island	Fishing Plant gathering Teaching area, Cabin	Treaty 8 Tribal Association	Teaching areas	Inundation

Place Name	Landscape Feature	Current Uses	First Nations	Reported Cultural Values	Interaction
Hudson's Hope	Peace River, Maurice Creek	Temporary habitation, cabin, gathering place, water route, fresh water, Fishing	Treaty 8 Tribal Association		
		Trapping, trails	Saulteau	Trapline, trails	
		Hunting, fishing	Duncan's First Nation	Moose, walleye	
		Hunting, fishing	Horse Lake First Nation	Moose, deer, walleye, jackfish	
Lynx Creek	Creek confluence with Peace River,	Plant gathering place, fishing, hunting, Place name, temporary habitation, gathering place	Treaty 8 Tribal Association	Place name	
Dry Creek area	Dry creek confluence with Peace, and islands	Teaching area, cultural area, fishing, hunting, earth material, temporary habitations, cabin	Treaty 8 Tribal Association		Inundation, Highway 29 realignment
Farrell Creek	Creek confluence with Peace	Teaching area, cultural area, temporary habitations, fishing	Treaty 8 Tribal Association		Inundation, Highway 29 realignment
		Hunting area, camp site	Blueberry River	Moose, Elk, camp site	
		Gathering	Saulteau	Wild onion	
		Fishing	Duncan's First Nation	Bull trout	
Between Farrell Creek and the site of Farrell Creek	Island	Fishing, firewood, cabins, temporary habitation	Treaty 8 Tribal Association		Inundation
	Between Farrell Creek and Halfway River	Hunting, fishing, camp sites	Blueberry	Black bear, camp sites	
Attachie	Halfway River confluence with Peace River, islands	Teaching area, place names, cultural area, plant gathering, feather gathering, fishing, temporary habitation, gathering place	Treaty 8 Tribal Association	Traditional burial site	Inundation
		Hunting, fishing, gathering, camp site, spiritual site	Blueberry River	Moose, elk, berries, camp site, spiritual sites	
		Trapping, harvesting, camps, day camps	Saulteau	Trapline, tree harvest, herbs, camps	
		Gathering	Duncan's First Nation	Plants and earth gathering sites	

Place Name	Landscape Feature	Current Uses	First Nations	Reported Cultural Values	Interaction
Bear Flats	Cache Creek confluence with Peace River, Bear Flats	Temporary habitation, cabin, gathering place, hunting, teaching areas, place names, plant gathering, fresh water, firewood, earth material	Treaty 8 Tribal Association	Traditional burial site	Inundation; Highway 29 realignment
		Hunting, fishing, gathering, camp site	Blueberry River	Moose, elk, deer, berries, camp	
Moberly River to Fort St. John Historical Site	Confluence with Peace River, islands, north and south banks	Gathering place, temporary habitation, cabins, plant gathering, fresh water, fishing, hunting, heritage resource	Treaty 8 Tribal Association	Heritage resource	Inundation
	Wilder Creek	Hunting, camp site	Blueberry River	Moose, Deer, camp site	
		Hunting, camps	Saulteau	Moose, elk, deer, brown bear, waterfowl	
		Fishing	Duncan's First Nation	jackfish	
Fort St. John Historical Site	Islands, Peace River,	Gathering place, cultural area	Treaty 8 Tribal Association		No interaction
		Overnight sites	Horse Lake First Nation	Overnight sites	
Boucher Lake	Lake	Hunting, Fishing, Plant gathering, Place name, cabins, temporary habitations	Treaty 8 Tribal Association		Clearing for Transmission line Right of Way
Boudreau Lake	Lake	Hunting, trapping, fishing, gathering, cabins, day camps	Treaty 8 Tribal Association Saulteau	Trapline, moose, elk, deer, black bear, water fowl, birds, rabbit, beaver, martin, wolf, lynx, muskrat, weasel, coyote, fisher, mink, wolverine, fox, jackfish, berries, trees, herbs, roots, hay, cabins, day camps, trails	Clearing for Transmission line Right of Way
		Hunting, trapping, cabins	Saulteau	Deer, black bear, birds, wolf, weasel, coyote, mink, fox, trapline, cabins	

Place Name	Landscape Feature	Current Uses	First Nations	Reported Cultural Values	Interaction
Monias Lake	Lake	Trapping, hunting, gathering, harvesting, camps, day camps	Saulteau	Traplines, moose, elk, deer, black bear, brown bear, waterfowl, Ptarmigan, Grouse, eagles, rabbit, weasel, coyote, fox, herbs, lumber, camps, day camps, trails	Clearing for Transmission line Right of Way
Taylor and the Lower Pine	Confluence of at the Peace River near Taylor	Hunting, fishing, gathering, overnight sites	Duncan's First Nation	Moose, jackfish, plants and earth gathering sites, overnight sites,	
		Hunting	Saulteau	Deer	
		Hunting, fishing, overnight sites	Horse Lake First Nation	Moose, elk, jackfish, overnight sites, gathering sites	

19.4.7 Mitigation Measures – Change in Cultural and Traditional Uses of the Land

Mitigation measures to addr ess potential adve rse Project effects on current cultural and traditional use of lands will be achieved through the following commitments:

- Work with Aboriginal groups to ground truth traditional land use information for specific areas within the Project activity zone prior to commencing construction, e.g., when determining the exact location of an access road..
- ~~Continue to consult with Aboriginal groups regarding clearing plans and protocols~~.
- Develop a communications program to inform harvesters of planned or unplanned events that may affect opportunities to harvest plants, berries, and other resources
- ~~Consult with Aboriginal groups respecting the development of habitat compensation projects that align with BC Hydro compensation programs~~ Consider developing habitat compensation projects that align with BC Hydro compensation programs
- Work with Aboriginal groups to identify permanent habitation structures used in the current use of lands and resources for traditional purposes that may be lost to inundation. Effects on cabins associated with tenured trap lines will be addressed as set out in the Harvest of Fish and Wildlife Resources VC. Where untenured cabins may be impacted by the Project, BC Hydro will work with Aboriginal individuals to determine appropriate measures that could be implemented.
- Work with Aboriginal groups to identify potential sites for re-location of medicinal and food plants to compensate for areas that will be inundated
- Use only indigenous and/or non-invasive plants and grasses in re-vegetation programs associated with the Project
- Engage with Aboriginal groups around any reclamation phase that may present opportunities to restore ecological communities that support species of high traditional use value

- Be prepared to ~~P~~provide support for the indigenous plant nursery owned by West Moberly and Saulteau First Nations located at Moberly Lake. The First Nations have a business plan to support propagation of a wide range of indigenous plant species for use in reclamation work.
- Establish a Culture and Heritage Resources Committee to provide advice and guidance on the mitigation of specific effects of the Project on culture and heritage resources. The Committee would consist of BC Hydro officials and Aboriginal members whose communities are in the immediate vicinity of the Project.
- Consider implementing, in consultation with Aboriginal groups and British Columbia where appropriate, the following potential initiatives:
    - The identification and naming of key cultural sites and the potential to integrate Aboriginal names into Project operations and sites;
    - Recording of stories and history associated with key cultural sites that may be affected by the Project;
    - The protection and documentation, including mapping, of important Aboriginal trails and sites;
    - Contribute funding to support a youth culture camp that includes transfer of knowledge around medicinal and food plants;
    - Engage with Aboriginal groups to commemorate the lost and submerged places;
    - Engage with Aboriginal groups around potential plans to undertake ceremonies prior to the commencement of construction on key elements of the Project; and
    - Develop and implement an education program respecting Aboriginal culture, history and use of lands and resources in the Project Area to be offered to all workers on the Project.
- Implement all mitigation measures set out in Volume 2 Section 13 Vegetation and Ecological Communities
- Implement all mitigation measures set out in Volume 4 Section 32 Heritage Resources
- Implement those measures supporting the development of new shoreline recreation sites in Volume 3 Section 25 Outdoor Recreation and Tourism
- Implement measures supporting the development of 3 boat launches along the Site C reservoir accessible via Highway 29 to support navigability and navigable use, and the re-establishment of recreational sites on the Site C reservoir and downstream, and to re-establish and create new use patterns and access, as set out in Volume 3 Section 26 Navigation

19.4.8 Summary of Effects Assessment and Mitigation Measures

A summary of potential effects and mitigation measures is shown for current use of lands and resources for traditional purposes in Table 19.12.

Table 19.12 Project Effects and Mitigation Measures – Current Use of Lands and Resources for Traditional Purposes

Project Phase	Potential Effect	Mitigation Measures	Mitigation Effectiveness	Responsibility
Construction and operations	Changes in fishing opportunities and practices	~~Consult with Aboriginal groups respecting the~~Consider developing~~ment of~~ fish habitat compensation projects that align with BC Hydro compensation programs. ~~Seek input from Aboriginal groups respecting mitigation strategies.~~ ~~Continue to consult with Aboriginal groups on clearing plans and protocols.~~ Develop a communications program to inform harvesters of planned or unplanned events related to construction activities that may affect fishing opportunities or access. Develop a communications program to inform harvesters of longer term changes in fish community composition. Implement all mitigation measures set out in Volume 2 Section 12 Fish and Fish Habitat. Implement measures supporting the development of 3 boat launches along the Site C reservoir accessible via Highway 29 to support navigability and navigable use, and the re-establishment of recreational sites on the Site C reservoir and downstream, and to re-establish and create new use patterns and access, as set out in Volume 3 Section 26 Navigation.	The effectiveness of mitigation measures that address effects on Aboriginal fishing opportunities and practice is not well understood. The potential risk associated with the uncertainty of the effectiveness of mitigation measures is that the current use of particular locations for particular cultural or traditional purposes may be permanently undermined and that use may not be readily reproduced elsewhere. As a result, follow-up programs may be required. The effectiveness of mitigation measures for fish and fish habitat is included in Volume 2 Section 12 Fish and Fish Habitat. The effectiveness of mitigation measures for effects on navigation is included in Volume 3 Section 26 Navigation.	BC Hydro
Construction and Operations	Changes in hunting and trapping opportunities and practices	~~Consult with Aboriginal groups respecting the~~Consider developing~~ment of~~ wildlife habitat compensation projects that align with BC Hydro compensation programs. ~~Seek input from Aboriginal groups respecting mitigation strategies, such as~~Develop mitigation measures ~~related~~intended to decrease impacts on First Nation trap lines in the Project activity zone. ~~Continue to consult with Aboriginal groups on clearing plans and protocols.~~ Develop a communications program to inform harvesters of planned or unplanned events related to construction activities that may affect hunting opportunities or access. Implement all mitigation measures set out in Volume 2 Section 14 Wildlife Resources. Implement all mitigation measures set out in Volume 3 Section 24 Harvest of Fish and	The effectiveness of mitigation measures that address effects on Aboriginal hunting and trapping opportunities and practices is not well understood. The potential risk associated with the uncertainty of the effectiveness of mitigation measures is that the current use of particular locations for particular cultural or traditional purposes may be permanently undermined and that use may not be readily reproduced elsewhere. As a result, follow-up programs may be required. The effectiveness of mitigation measures for	BC Hydro

Project Phase	Potential Effect	Mitigation Measures	Mitigation Effectiveness	Responsibility
		Wildlife Resources pertaining to trapping.	wildlife resources is included in Volume 2 Section 14 Wildlife Resources. The effectiveness of mitigation measures for the harvest of fish and wildlife resources pertaining to trapping is included in Volume 3 Section 24 Harvest of Fish and Wildlife Resources.	
Construction and operations	Changes in cultural and traditional uses of the land	Work with Aboriginal groups to ground truth traditional land use information for specific areas within the Project activity zone prior to commencing construction, e.g. when determining the exact location of an access road. ~~Continue to consult with Aboriginal groups regarding clearing plans and protocols.~~ Develop a communications program to inform harvesters of planned or unplanned events that may affect opportunities to harvest plants, berries, and other resources. ~~Consult with Aboriginal groups respecting the~~Consider developing~~ment of~~ habitat compensation projects that align with BC Hydro compensation programs. Work with Aboriginal groups to identify permanent habitation structures used in the current use of lands and resources for traditional purposes that may be lost to inundation. Effects on cabins associated with tenured trap lines will be addressed as set out in Volume 3, Section 24.4.9.1, Harvest of Fish and Wildlife Resources. Where untenured cabins may be impacted by the Project, BC Hydro will work with Aboriginal individuals to determine appropriate measures that could be implemented. Work with Aboriginal groups to identify potential sites for re-location of medicinal and food plants to compensate for areas that will be inundated. Use only indigenous and/or non-invasive plants and grasses in re-vegetation programs associated with the Project. Engage with Aboriginal groups around any reclamation phase that may present opportunities to restore ecological communities that support species of high traditional use value. Be prepared to ~~P~~provide support for the	The effectiveness of mitigation measures that address effects on Aboriginal cultural and traditional uses of the land is not well understood. The potential risk associated with the uncertainty of the effectiveness of mitigation measures is that the current use of particular locations for particular cultural or traditional purposes may be permanently undermined and that use may not be readily reproduced elsewhere. As a result, follow-up programs may be required. The effectiveness of mitigation measures for effects on vegetation and ecological community is included in Volume 2 Section 13 Vegetation and Ecological Communities. The effectiveness of mitigation measures for effects on heritage resources is included in Volume 4 Section 32 Heritage Resources. The effectiveness of mitigation measures for effects on outdoor recreation and tourism is included in Volume 3 Section 25 Outdoor Recreation and Tourism. The effectiveness of mitigation measures for effects on navigation is	BC Hydro

Project Phase	Potential Effect	Mitigation Measures	Mitigation Effectiveness	Responsibility
		indigenous plant nursery owned by West Moberly and Saulteau First Nations located at Moberly Lake. The First Nations have a business plan to support propagation of a wide range of indigenous plant species for use in reclamation work. Establish a Culture and Heritage Resources Committee to provide advice and guidance on the mitigation of specific effects of the Project on culture and heritage resources. The Committee would consist of BC Hydro officials and Aboriginal members whose communities are in the immediate vicinity of the Project. Consider implementing, in consultation with Aboriginal groups and British Columbia where appropriate, the following potential initiatives: ▪ the identification and naming of key cultural sites and the potential to integrate Aboriginal names into Project operations and sites; ▪ recording of stories and history associated with key cultural sites that may be affected by the Project; ▪ the protection and documentation, including mapping of important Aboriginal trails and sites; ▪ contribute funding to support a youth culture camp that includes transfer of knowledge around medicinal and food plants; ▪ engage with Aboriginal groups to commemorate the lost and submerged places; ▪ engage with Aboriginal groups around potential plans to undertake ceremonies prior to the commencement of construction on key elements of the Project; and ▪ develop and implement an education program respecting Aboriginal culture, history and use of lands and resources in the Project Area offered to all workers on the Project. Implement all mitigation measures set out in Volume 2 Section 13 Vegetation and Ecological Communities. Implement all mitigation measures set out in Volume 4 Section 32 Heritage Resources. Implement those measures supporting the development of new shoreline recreation sites in Volume 3 Section 25 Outdoor	included in Volume 3 Section 26 Navigation.	

Project Phase	Potential Effect	Mitigation Measures	Mitigation Effectiveness	Responsibility
		Recreation and Tourism. Implement measures supporting the development of 3 boat launches along the Site C reservoir accessible via Highway 29 to support navigability and navigable use, and the re-establishment of recreational sites on the Site C reservoir and downstream, and to re-establish and create new use patterns and access, as set out in Volume 3 Section 26 Navigation.		

19.4.9 Other Mitigation Options Considered

BC Hydro did not consider any other mitigation measures for effects on current use of lands and resources for traditional purposes.

19.5 Residual Effects

19.5.1 Current Use of Lands and Resources for Traditional Purposes - Fishing

After proposed mitigation, Project construction would have a residual adverse effect on the current use of lands and resources for fishing. Fishing opportunities and practices of BRFN, SFN, T8TA, DFN and HLFN would be adversely affected due to reduced access to fishing areas (including potentially increased competition with non-Aboriginal anglers), and potentially reduced success in harvest of targeted species.

During operations, the Project would have a residual adverse effect on the current use of lands and resources for fishing. Fishing opportunities and practices of BRFN, SFN, T8TA, DFNs and HLFN would be adversely affected due to reduced access to fishing areas. Over time, as the reservoir develops into a stable fishery and local knowledge develops about how to practice fishing there, the Project may have a beneficial effect on fishing opportunities. However, it is not certain when these conditions may occur.

19.5.2 Current Use of Lands and Resources for Traditional Purposes – Hunting and Trapping

After proposed mitigation, the Project would have a residual adverse effect on effect on the current use of lands and resources for hunting and trapping (non-tenured). Hunting and trapping opportunities and practices of BRFN, SFN, T8TA, DFN, HLFN, and DTFN would be adversely affected due to temporary reductions in availability of targeted species and temporarily reduced access to hunting areas during construction.

Current use of lands and resources for traditional purposes – other cultural and traditional uses

After proposed mitigation, the Project would have a residual adverse effect on other cultural and traditional uses of the land. Due to permanent loss of use of and access to certain culturally important places and valued landscapes within the LAA, the use of those areas by T8TA, BRFN, SFN, DFN, and HLFN will be permanently impaired.

19.5.3 Characterization of Residual Effects

Criteria used to characterize residual effects, presented in Table 19.13 were defined based on experience and results of consultation with Aboriginal groups.

In Table 19.13, “adaptable” refers to BC Hydro’s understanding of a demonstrated quality of Aboriginal community land uses, where patterns of land use are spatially and temporally flexible, capable of taking in multiple environments (lacustrine, riverine), species, and opportunities. For example, adaptability can be seen in a community’s reported use of multiple localities (Peace River, Moberly, Williston Reservoir) and settings (lake, river, reservoir) for the pursuit of multiple species of fish (jackfish, whitefish, kokanee). Our use of “adaptability” arises from the studies provided by Aboriginal communities, and supported by additional research.

Table 19.13 Characterization Criteria for Residual Effects on Current Use of Lands and Resources for Traditional Purposes

Criterion	Description	Quantitative Measure or Definition of Qualitative Categories
Direction	The ultimate long-term trend of the effect	**Adverse:** nature of the VC is negatively altered in comparison to baseline conditions and trends
		Positive: nature of the VC is enhanced in comparison to baseline conditions and trends
		Neutral: condition of the VC is unchanged in comparison to baseline conditions and trends
Magnitude	The amount of change in a measurable parameter or variable relative to baseline case	**Low:** current use of lands and resources for traditional purposes is adaptable and may be readily transferred elsewhere without undermining the traditional purpose
		Moderate: current use of lands and resources for traditional purposes is adaptable and may be readily transferred , however, the traditional purpose is undermined
		High: current use of lands and resources for traditional purposes is highly impaired and is not adaptable or readily transferrable elsewhere
Geographical Extent	The geographic area in which the effect of a defined magnitude occurs	**Site-specific:** changes to one site or one restricted area
		Local: changes to multiple sites or a large area within the LAA
Frequency	The number of times during a project or a specific project phase that effect may occur	**Once:** occurs once
		Continuous: occurs on a regular basis and at regular intervals
Duration	The period of time required until the VC returns to its baseline condition, or the effect can no longer be measured or otherwise perceived	**Short-term:** effect is limited to <1 year
		Medium-term: effect occurs >1 year and less than or equal to 8 years (construction phase)
		Long-term: effect lasts beyond construction and up to 10 years of the operation phase of the Project
		Permanent: effect extends beyond 10 years of the operations phase~~>10 years~~
Reversibility	The likelihood that a measurable parameter will recover from an effect	Effect **reversible** with reclamation and/or over time
		Effect **is not reversible**
Context	The general characteristics of the area in which the project is located Disturbance	**Disturbed:** Area has been substantially previously disturbed by human development or human development is still present
		Undisturbed: Area relatively pristine or not adversely affected by human activity
	Importance of use	**High:** current use of area or resource is indicated to be of high importance for traditional purposes
		Low: current use of area or resource is indicated to be of low importance for traditional purposes
	Multiplicity of use	**Multiple:** area or resource is indicated to have multiple uses for traditional purposes
		Single/few: area or resource is indicated as having single or few uses for traditional purposes
	Importance of area	**High:** area indicated to be of high importance for traditional uses
		Low: area indicated to be of low importance for traditional uses

Criterion	Description	Quantitative Measure or Definition of Qualitative Categories
Level of Confidence	Certainty in quantifying or estimating the effect; the quality and/or quantity of data; the understanding of the effect mechanisms; and the effectiveness of mitigation.	Low: assessment is t restricted by uncertainty regarding human response to effect; lack of grounds of comparison between physical environments and human societies; and limited data
		Moderate: assessment is based on reasonable understanding of cause-effect relationships and ample data. Moderate grounds of comparison between physical environments and human societies
		High: assessment is based on including good understanding of cause-effect relationships and ample data. Solid grounds of comparison between physical environments and human societies
Probability	The likelihood that an adverse effect will occur	Low: An effect is unlikely to occur
		High: An effect is likely to occur

Current use of Lands and Resources for Traditional Purposes - Fishing

The current use of lands and resources for fishing by T8TA, SFN, BRFN, DFN and HLFN would be adversely affected by the Project. The effect on fishing opportunities and practices is adverse, as the nature of the indicator is negatively altered in comparison to baseline trends. Fishing opportunities and practices will be negatively altered within the LAA by the construction of the Project.

Boat and shore-based river fishing along an 85-km stretch of the main stem Peace River and practices will be negatively altered within the LAA by the construction of the Project.

Boat and shore-based river fishing along an 85-km stretch of the main stem Peace River between the dam site and the Canyon dam will be inundated. This loss encompasses the inundation of several river and stream mouths valued for their fishing. The effect would be of moderate magnitude for T8TA, SFN, and BRFN. Although some aspects of the traditional purpose of the activity may be altered by transferring them to another location, fishing practices of Aboriginal people are adaptable, spatially and temporally. Fishing currently undertaken in the area of the proposed reservoir may be done, and in some cases is being done, downstream at the confluences of the Pine and Beatton rivers. Additional confluences are farther downstream at the Kiskatinaw, Pouce Coupe, and Clear River.

The effect would be of low magnitude for DFN, and HLFN, as the Peace River section within the LAA is at the periphery of their use of fish resources. Fishing practices of Aboriginal people are adaptable, spatially and temporally, and the traditional purpose of the activity would not be undermined for members of DFN and HLFN, although an increase in cold water species downstream of the dam would pose an adaptive challenge and opportunity for harvesters.

The geographic extent of the effect would be local, as it is confined within the LAA. The effect would be continuous, at least until the reservoir stabilizes and Aboriginal fishing practices adapt to the post-project environment, and not reversible, although fishing practices are adaptable to it. The effect is long term and there is uncertainty around the time sufficient to re-establish a stable fishery resource, coupled with a body of knowledge and a set of practices about its exploitation.

The geographical and environmental setting for fishing can be described as disturbed, although some elements of the setting remain undisturbed or resilient. The confidence level in the assessment is low, because the assessment is restricted by limited TLUS

data, uncertainty regarding the biophysical effects of the Project, uncertainty regarding reactions of the environment and responses to change by Aboriginal harvesters. If the Project proceeds, there would be a high probability that an adverse effect would occur because the physical changes in the Project activity zone, particularly Site C reservoir filling, would alter fishing areas.

Current Use of Lands and Resources for Traditional Purposes – Hunting and Trapping

The current use of lands and resources for hunting and trapping by T8TA, SFN, BRFN, DFN, HLFN, and DTFN will be adversely affected by the Project. Hunting and trapping opportunities and practices will be negatively altered in comparison to baseline trends within the LAA during the construction of the Project. The effect would be of low magnitude for DFN, HLFN, and DTFN, as hunting practices of Aboriginal people are adaptable, spatially and temporally, and the affected areas are at the periphery of their current use hunting areas, as indicated in traditional use studies. The effect would be of low to moderate for BRFN, and moderate magnitude for SFN and T8TA, as the affected areas are within their core current use hunting areas. The geographic extent of the effect would be local, as it is confined within the LAA. The effect would be temporary, at least until access restrictions are lifted within the reservoir and animals and Aboriginal hunting and non-tenured trapping practices adapt to the post-project environment. The effects are reversible, and are short-term. The geographical and environmental setting for the indicator can be described as disturbed, although some elements of the setting remain undisturbed or resilient. SFN and T8TA indicate that the area is of high importance and is used for multiple species harvesting purposes. The confidence level in the assessment is low, as the assessment is restricted by limited TLUS data, uncertainty regarding the relationship between biophysical effects of the Project, reactions of the environment, and responses to change by Aboriginal people. If the Project proceeds, there would be a high probability that an adverse effect would occur because the physical changes in the Project activity zone, particularly Site C reservoir filling and habitat loss and fragmentation, and changes to access, would alter hunting opportunities at least in the short term.

Current Use of Lands and Resources for Traditional Purposes – Other Cultural and Traditional Uses

The Project would have a residual adverse effect on other cultural and traditional uses of the land for T8TA, BRFN, SFN, DFN, and HLFN.

The effect on other cultural and traditional uses of the land is adverse, as the nature of the indicator is negatively altered in comparison to baseline trends. Opportunities to use special high-value places and landscapes along the Peace River for the conduct of multiple current use and cultural activities will be negatively altered within the LAA. The effect would be permanent and the magnitude would be high for T8TA, SFN, and BRFN, moderate-low for DFN, and low for HLFN. The geographic extent of the effect is local, as it will affect Attachie, Bear Flats, Farrell Creek as well as seven other sites reported to have high cultural value within the LAA. The effect will occur once (inundation) and will be permanent. The geographical and environmental context for the effect is disturbed. Aboriginal groups report that other cultural and traditional uses for traditional purposes are of high importance, and that the area is of high importance. The confidence level in the assessment is moderate as there is reliable body of data for this analysis. However, adaptive response to change by Aboriginal persons is

unknown. If the Project proceeds, there would be a high probability that an adverse effect would occur because changes in the Project activity zone would inundate or alter the areas.

Table 19.14 Characterization of Residual Effects: Current Use of Lands and Resources for Traditional Purposes

Effect	Phase	Residual Environmental Effects							
		Direction	Magnitude	Geographic Extent	Duration and Frequency	Reversibility	Context	Level of Confidence	Probability
Changes in fishing opportunities and practices	Construction And operation	Adverse	Moderate – T8TA, SFN, BRFN Moderate-Low – DFN, HLFN	Local	Long-term and continuous	Not reversible	Disturbed; Area and use of high importance; Multiple uses	Low	High
Changes in hunting and trapping opportunities and practices	Construction And operation	Adverse	Low – DFN, DTFN, HLFN, Moderate – SFN Moderate-low – BRFN	Local	~~Long~~Short-term and continuous	~~Not r~~Reversible	Disturbed; Area and use of high importance; Multiple uses	Low	High
Changes to other cultural and traditional uses of the land	Construction And operation	Adverse	High – T8TA, SFN, BRFN Moderate-Low: Duncan‘s Low: HLFN	Local	Permanent and once~~Long-term and continuous~~	Not reversible	Disturbed; Area and use of high importance; Multiple uses	Moderate	High

19.5.4 Standards or Thresholds for Determining Significance

The significance of each residual effect is evaluated taking into consideration the criteria provided in Table 19.13, existing knowledge about current use of lands and resources for traditional purposes, and the likely effectiveness of mitigation. A determination of significance will be made where:

- A current use of lands for traditional purposes would be permanently undermined and its practice cannot be readily reproduced elsewhere; and
- the current use and area is indicated to be of high value or importance among Aboriginal groups for traditional purposes.

In determining significance, adaptability is accounted for in assessing whether a practice can be readily reproduced elsewhere.

19.5.5 Determination of Significance of Residual Effects

The measures identified to mitigate potential effects on Current Use of Lands and Resources for Traditional Purposes may not be fully effective. Consequently, the Project is likely to result in a residual adverse effect on the Current Use of Lands and Resources for Traditional Purposes.

Therefore, the significance of the potential residual adverse effects of the Project on this VC has been assessed as follows:

Current Use of Lands and Resources for Traditional Purposes – Fishing

The effect on current use of lands and resources for fishing would be adversely altered by the Project. Although some aspects of the traditional purpose of the activity may be altered by transferring them to another location, fishing practices of Aboriginal people are adaptable, spatially and temporally. The effect on current use of lands and resources for fishing is not significant.

Current Use of Lands and Resources for Traditional Purposes – Hunting and Trapping

The effect on hunting and trapping opportunities and practices would be adverse, however, the traditional purpose of the activity would not be undermined. The Project effect on current use of lands and resources for hunting and trapping (non-tenured) is not significant.

Current use of Lands and Resources for Traditional Purposes – Other Cultural and Traditional Uses

The effect on other cultural and traditional uses would be significant for T8TA, SFN and BRFN at particular high value places along the Peace River in the LAA, most notably at Bear Flats, Farrell Creek and Attachie. These spaces, indicated to be of high value by Aboriginal groups, will be inundated and access to them will be permanently impaired. Consequently, the effect of the project on current use of lands and resources for other cultural and traditional uses by those three Aboriginal groups is significant.

In summary, the Project may result in a significant residual adverse effect on certain current uses of lands and resources for traditional purposes for certain Aboriginal groups. As discussed in Section 34. 7.1, Volume 5 Asserted or Established Aboriginal Rights and Treaty Rights, Aboriginal Interests and Information Requirements, the Project may impact the exercise of treaty rights to hunt, fish and trap. BC Hydro is prepared to address and accommodate the potential for the Project to do so by entering into arrangements set out in Impact Benefit Agreements. Those agreements may provide for

lump sum cash payments, payment streams over time, the transfer of Crown lands to the affected Aboriginal groups in fee simple, potential land protection measures or the establishment of special management zone designations. BC Hydro has offered to enter into initial discussions with Aboriginal groups that are likely to be impacted by the Project and to date, three Aboriginal groups have accepted BC Hydro's offer to enter into discussions. Those arrangements, if entered into, could, in addition to accommodating the potential impact on the exercise of treaty rights, further avoid, reduce, or compensate for, the potential residual adverse effects of the Project on the current use of lands and resources for traditional purposes.

Table 19.15 Summary of Assessment of Potential Significant Residual Adverse Effects

Valued Component	Project Phase	Potential Adverse Effect	Key Mitigation Measures	Significance Analysis of Residual Effects
Current Use of Lands and Resources for Traditional Purposes	Construction and Operation	Changes in fishing opportunities and practices	Implement of all mitigation measures set out in the Fish and Fish Habitat VC and those set out in the Navigation VC for specific measures respecting navigation. ~~Consult with Aboriginal groups respecting the~~Consider developing~~ment of~~ fish habitat compensation projects that align with BC Hydro compensation programs. ~~Seek input from Aboriginal groups respecting mitigation strategies.~~ ~~Continue to consult with Aboriginal groups on clearing plans and protocols.~~ Develop a communications program to inform harvesters of planned or unplanned events related to construction activities that may affect fishing opportunities or access. Develop a communications program to inform harvesters of longer term changes in fish community composition.	Not significant
	Construction and operation	Changes in hunting and trapping opportunities and practices	Implement of all mitigation measures set out in the Wildlife Resources VC and those set out in Harvest of Fish and Wildlife Resources VC, pertaining to trapping. ~~Consult with Aboriginal groups respecting the~~Consider developing~~ment of~~ wildlife habitat compensation projects that align with BC Hydro compensation programs. ~~Seek input from Aboriginal groups respecting mitigation strategies, such as~~Develop mitigation measures ~~related~~intended to decrease impacts on trap lines in the Project activity zone. ~~Continue to consult with Aboriginal groups on clearing plans and protocols.~~ Develop a communications program to inform harvesters of planned or unplanned events related to construction activities that may affect hunting opportunities or access.	Not signficant

Valued Component	Project Phase	Potential Adverse Effect	Key Mitigation Measures	Significance Analysis of Residual Effects
	Construction and operation	Changes in other cultural and traditional uses	Implement of all mitigation measures set out in the Vegetation and Ecological Communities VC, and the Heritage Resources VC, and those measures supporting the development of new shoreline recreation sites in the Outdoor Recreation and Tourism. Work with Aboriginal groups to ground truth traditional land use information for specific areas within the Project activity zone prior to commencing construction, e.g. when determining the exact location of an access road. ~~Continue to consult with Aboriginal groups regarding clearing plans and protocols.~~ Develop a communications program to inform harvesters of planned or unplanned events that may affect opportunities to harvest plants, berries, and other resources. ~~Consult with Aboriginal groups respecting the~~Consider developing~~ment of~~ habitat compensation projects that align with BC Hydro compensation programs. Work with Aboriginal groups to identify permanent habitation structures used in the current use of lands and resources for traditional purposes that may be lost to inundation. Effects on cabins associated with tenured trap lines will be addressed as set out in Volume 3, Section 24.4.9.1, Harvest of Fish and Wildlife Resources. Where untenured cabins may be impacted by the Project, BC Hydro will work with Aboriginal individuals to determine appropriate measures that could be implemented. Work with Aboriginal groups to identify potential sites for re-location of medicinal and food plants to compensate for areas that will be inundated. Use only indigenous and/or non-invasive plants and grasses in re-vegetation programs associated with the Project. Engage with Aboriginal groups around any reclamation phase that may present opportunities to restore ecological communities that support species of high traditional use value. Be prepared to ~~P~~provide support for the indigenous plant nursery owned by West Moberly and Saulteau First Nations located at Moberly Lake. The First Nations have a business plan to support propagation of a	Significant

Valued Component	Project Phase	Potential Adverse Effect	Key Mitigation Measures	Significance Analysis of Residual Effects
			wide range of indigenous plant species for use in reclamation work. Establish a Culture and Heritage Resources Committee to provide advice and guidance on the mitigation of specific effects of the Project on culture and heritage resources. The Committee would consist of BC Hydro officials and Aboriginal members whose communities are in the immediate vicinity of the Project. Consider implementing, in consultation with Aboriginal groups and British Columbia where appropriate, the following potential initiatives: the identification and naming of key cultural sites and the potential to integrate Aboriginal names into Project operations and sites; recording of stories and history associated with key cultural sites that may be affected by the Project; the protection and documentation, including mapping, of important Aboriginal trails and sites; sponsorship of a youth culture camp that includes transfer of knowledge around medicinal and food plants; engagement with Aboriginal groups around a plan to commemorate the lost and submerged places and stories; engagement with Aboriginal groups around potential plans to undertake ceremonies prior to the commencement of construction on key elements of the Project; and development and implementation of an education program respecting Aboriginal culture, history and use of lands and resources in the Project Area to be offered to all workers on the Project.	

19.6 Cumulative Effects Assessment

The assessment of the cumulative effects of the Project on the current use of lands and resources for traditional purposes VC has been conducted subject to limitations in the information relied upon. Information about the potential effects of other projects and activities often did not include a comprehensive analysis of potential residual effects on Aboriginal current use of lands and resources for traditional purposes. As described in Section 19.2.~~1~~, the spatial information supplied by Aboriginal groups was frequently limited to areas adjacent to the Project activity zone, buffered, or redacted for purposes of confidentiality or sensitivity, making it difficult to identify specific locations or to determine the geographic extent and range of current uses.

19.6.1 Screening of Cumulative Effects

The Project is likely to result in residual adverse effects on current use of lands and resources for traditional purposes by SFN, T8TA, BRFN, DTFN, DFN, and HLFN for fishing, hunting and trapping, and other cultural and traditional uses. Consequently, the potential cumulative effects of the Project on current use of lands and resources for traditional purposes have been assessed.

The cumulative effects screening follows methods explained in Volume 2 Section 10 Effects Assessment Methodology and includes a review of projects and activities, the residual effects of which may interact cumulatively with potential residual effects to current use of lands and resources for traditional purposes as a result of the Project.

19.6.1.1 Cultural and traditional uses of the land

The projects and activities are generally well removed from the LAA and are unlikely to have any residual effect on the use for cultural and traditional purposes of the lands and resources that may be adversely affected by the Project. Consequently, the residual effects of the Project are unlikely to overlap with the effects of those projects and activities. Further, the adverse effect of the Project results from inundation of particular high value sites. Consequently, even if there were some overlap, the effects would not accumulate. For these reasons, the Project is unlikely to result in a cumulative effect on the use of lands and resources for other cultural and traditional purposes.

Fishing for Traditional Purposes

Two projects, the Dunvegan Hydroelectric Project and the Montney Gas Play, were considered in the assessment of the potential cumulative effects of the Project on fish and fish habitat VC (Volume 2 Section 12 Fish and Fish Habitat). Neither has been assessed as likely to have effects that would combine with those of the Project to produce a cumulative effect on fish and fish habitat. For the full cumulative effects assessment, see Volume 2 Section 12. Given these results, the Project is unlikely to result in cumulative effects on fishing for traditional purposes.

Hunting and Trapping for Traditional Purposes

The Project is likely to result in residual adverse effects on hunting and trapping for traditional purposes by SFN, T8TA, BRFN, DTFN, DFN, and HLFN. Information about the potential residual adverse effects on current use of lands and resources for traditional purposes is available for some of the other projects considered in the cumulative effects assessment. Where this information is available, consideration has been given to whether the potential effects of the Project on hunting and trapping for traditional purposes would overlap in time and space with the effects of those projects and combine to produce a cumulative effect. Projects that provide some analysis of effects on current use of lands and resources for traditional purposes are Alliance Pipeline Sunrise Meter Station Relocation, Dokie Wind Energy Project, Groundbirch Mainline, Provident Beatton River Replacement Project, Wildmare Wind Energy Project, and Wartenbe Wind Energy Project. These are discussed below.

For each of the remaining projects or activities that may have adverse residual effects on wildlife or wildlife habitat, the prospect that those effects will combine with the residual adverse effects of the Project on wildlife resources is raised. This, in turn, raises the prospect that the combined effect will reduce the availability of species to a level that would impair hunting for traditional purposes.

The conversion of habitats due to multiple projects and activities within the RAA will put increased pressure on wildlife populations, particularly to those species that are habitat specialists - strongly associated with mature and old forest, or wetlands. Species generalists, or those more tolerant of habitat edges and early seral vegetation communities, may also be affected, but could also respond positively to the change.

Most projects and activities will result in a further reduction of habitats within the RAA; however not all projects would lead to measureable changes to intact mature and old forest communities and wetlands. The detail of specific residual effects of many of the projects and activities that were reviewed is limited, but based on information that is readily available, the following projects and activities are expected to result in a measureable reduction of habitats associated with ungulates, fur-bearers, and non-migratory game birds (grouse) and migratory waterfowl: Provident Beatton River Replacement, Project, Dokie Wind Energy Project, Carbon Creek Coal mine, General Oil and Gas Activities, and General Forestry Activities. These are discussed below.

19.6.2 Description of Cumulative Effects

19.6.2.1 Alliance Pipeline Sunrise Meter Station Relocation

The project has been in operation since 2010, and involved the relocation of an existing meter station to a new 50 m by 50 m site closer to Huron Energy's Sunrise Compressor Station (TERA Environmental Consultants Ltd. 2010b), approximately 27 km northwest of Dawson Creek. The relocated meter station was constructed to accommodate the receipt of natural gas originating in the Sunrise producing area of northeastern B.C. The goal was to minimize natural gas liquids dropping out from the rich incoming natural gas stream before reaching the desired location.

The project‘s Environmental and Socio-Economic Assessment report concludes that given that the project is conducted entirely on privately owned agricultural lands, no effect on traditional use of lands is expected (TERA Environmental Consultants Ltd. 2010b).

Consequently, a cumulative effect on hunting and trapping for traditional purposes ~~trapping for~~ is unlikely.

19.6.2.2 Carbon Creek Coal Mine

This project involves the development of an open-pit surface and underground metallurgical coal mine. The mine will be designed to achieve a production rate of 2.9 million tonnes of clean coal per year, with an estimated mine life of 30 years (Rescan Environmental Services Ltd. 2012). Currently the project is in the Environmental Assessment stage, with construction of project tentatively planned to begin in 2014 and surface mine coal production beginning in same year.

The Project Description is available but no potential effects on current use of lands and resources for traditional purposes have yet been identified. The proponent has identified that the project is near the communities of MLIB, SFN, WMFN and BRFN (Rescan Environmental Services Ltd. 2012).

With a planned open-pit surface and underground coal mine, reductions in forests and possibly wetlands are anticipated. However, measureable reductions in the regional populations of ungulates, waterfowl, non-migratory game birds, and fur-bearers are not expected.

Consequently, a cumulative effect on hunting and trapping for traditional purposes is unlikely.

19.6.2.3 Dokie Wind Energy Project

Preliminary modelled layout comprises 200 turbines of 1.5 MW each. Phase 1 of the project (144 MW) has been operational since 2011. Phase 2 would include the construction of the remaining towers to produce 156 MW.

It is not clear from the Dokie Wind Energy Project Environmental Assessment Certificate Application whether the project is expected to have effects to current use activities undertaken by Aboriginal groups. The Application considers traditional land use of Halfway River First Nations, McLeod Lake Indian Band, Saulteau First Nations and West Moberly First Nations, but does not provide a residual effects statement (Hélimax et al. 2006a).

The project was described as reducing black huckleberry habitat, and would affect old forest, riparian habitats and wetlands (Hélimax et al. 2006a). Measureable reductions to regional populations of any of these species groups are not anticipated.

Consequently, a cumulative effect on hunting and trapping for traditional purposes is unlikely.

19.6.2.4 Groundbirch Mainline

NOVA Gas Transmission Ltd. operates a 24 km pipeline, of which 5 km parallels existing rights-of-way and roads; the remaining 19 km was newly cut (TERA Environmental Consultants Ltd. 2010a). A construction right-of-way of 39 m was required for the project, with 20 m being a permanent right-of-way and 19 m being temporary workspace. The pipeline is located 40 km northwest of Dawson Creek and 33 km southwest of Fort St. John. Construction of the project was completed in 2012.

The Groundbirch Mainline project has the potential to have residual effects on current use of hunting, trapping, or other cultural and traditional uses by SFN, WMFN, BRFN, DTFN, DFN and HLFN (these are First Nations that were included in a Traditional Ecological Knowledge survey conducted for that project).

The wildlife resources VC (Volume 2 Section 14) concluded that residual effects on wildlife habitat and resources are not expected to combine with those of the Project and that a cumulative effect is not expected.

Consequently, a cumulative effect on hunting and trapping for traditional purposes is unlikely.

19.6.2.5 Provident Beatton River Replacement Project

This project involved the replacement of portions of the approximately 53 km long Taylor to Boundary Lake Pipeline, which carries sweet high vapour pressure hydrocarbon products from the city of Taylor to Boundary Lake, Alberta. A 36 km long section of the pipeline required replacement to ensure safe and reliable operation. The majority of the replacement work occurred within the existing right-of-way under operations and maintenance activities; however, a new right-of-way (approximately 16 km long) was required for the construction of a more suitable crossing of the Beatton River (National Energy Board 2011).

The project may affect Sharp-tailed Grouse leks, will remove habitats within an ungulate winter range, and crosses two wetlands that are recognized as migratory waterfowl habitat (National Energy Board 2011). The project is not expected to have a measureable effect to regional populations of the any of these species groups.

The proponent identified ten Aboriginal groups with a potential interest in the Beatton River Replacement Project. The National Energy Board's Reasons for Decision statement indicates that the project is not expected to have adverse environmental effects on current traditional land use.

Consequently, a cumulative effect on hunting and trapping for traditional purposes is unlikely.

19.6.2.6 Wildmare Wind Energy Project

This project involves Finavera's construction of a 74 MW wind park, connector roads and electrical connections, access roads, substation and operations centre, and an overhead transmission line (Finavera Wind Energy Inc. 2011). It will be located 5 km west of Chetwynd. The project is currently under review.

Residual effects on First Nations traditional land use were assessed as follows:

- Potential loss of Traditional/Cultural Use Sites where Traditional/Cultural Activities: low magnitude, low probability, within the project footprint and low significance
- Potential decrease in value of hunting, trapping and fishing: low magnitude, high probability, within the project local study area, and low significance
- Potential decrease in value of plant gathering resources: low magnitude, within the project footprint, high probability and low significance (Finavera Wind Energy Inc. 2011)

Consequently, a cumulative effect on hunting and trapping for traditional purposes is unlikely.

19.6.2.7 Wartenbe Wind Energy Project

The project site is located in the south of the Peace River region of B.C. on Mount Wartenbe, southeast of Chetwynd. The project originally received its environmental Assessment Certificate in 2006, but subsequently changed ownership. An application to extend the deadline of the certificate was submitted in 2011, as construction had not commenced and the certificate was set to expire. In 2012, the name of the holder of the Environmental Assessment Certificate was again changed. The preliminary modelled layout includes 47 turbines of 1.5 MW each (AXYS Environmental Consulting Ltd 2006).

The proponent undertook a TLUS with MLIB, SFN, HRFN, and WMFN. Traditional Land Use sites were identified and mitigation measures were described. First Nations raised concerns regarding effects to habitat and water sources, and effects of access roads. In the Environmental Assessment Certificate Application indicated confidence "that the impact of the DWE Wartenbe Wind Energy Project has been significantly reduced" (Hélimax et al. 2006b).

Consequently, a cumulative effect on hunting and trapping for traditional purposes is unlikely.

19.6.2.8 General Oil and Gas and Forestry Activities

Oil and Gas

There are many oil and gas related activities found throughout the northeast portion of the province; collectively, there are a number of environmental effects that result from the exploratory stage, as well as from the drilling and development stage. As new extraction technologies become available, additional sites will be more attractive for exploration and development. The timing and level of development will likely be set by market prices, but recent plans for liquefied natural gas should continue interests in the region's gas sector.

According to information available, a total of 32 oil and gas facilities are approved or under review within the RAA. Facilities are point features that indicate any grouping of equipment where water, hydrocarbon liquids, or natural gas are processed, measured, upgraded, or stored (Ministry of Labour – Citizens' Services and Open Government 2012).

A total of 344 pipeline projects (from 2004 to present) are approved within the RAA, with another 23 under review. Linear length of pipeline was estimated from available spatial information and totals 377 km within the RAA.

Petroleum Access Roads are applications for roads over any Crown land. A total of 1,422 approved or proposed access road applications are within the RAA, with a total length of 823 km. In addition, there are 37 approved or proposed Petroleum Development Road applications, totalling 163 km within the RAA. Petroleum Development Roads applications are for construction or to existing non-status tenured roads over any Crown land and/or use of non-status, unencumbered existing access roads on Crown land.

The development of pipelines, seismic lines, drill sites, and access roads leads to habitat fragmentation and a reduction of interior habitats removed from unnatural (anthropogenic) edges. In addition to habitat loss, species that are less tolerant of human disturbance may be displaced. Collectively, oil and gas activities are expected to have measureable reductions to the total population of furbearers in the region. Depending on the location of the activity waterfowl, game birds, and ungulates may also be affected.

General Forestry

Volume 3 Section 21 Forestry provides a detailed review of forestry activities. Information provided in that section has been summarized below.

The same pressures associated with oil and gas activities would occur with forestry as well; however, typically this industry specifically targets mature and old forest stands. Therefore some furbearers (pine marten and fisher) will see measureable decreases in suitable habitats, and reductions in the regional populations are anticipated. Wetlands are generally avoided unless access is limited and there is no other feasible option. Together with oil and gas these two industries result in the greatest number of access roads within the RAA. While this does allow for greater access for hunting and trapping into previously inaccessible areas it also allows for greater industrial and recreational use which may put further pressure on harvestable species. Therefore, the potential for measureable reductions to ungulate populations within the RAA are also anticipated.

Oil and gas, as well as, forestry are considered the more prevalent activities occurring within the RAA. However, these activities are generally more scattered on the

landscape, occurring as smaller developments across a wider area. The Project, which is mostly confined to the Peace River valley, is the single largest foreseeable future development within the RAA.

Oil and gas, forestry, and the Project combined will likely result in a decrease in the regional populations of furbearers and ungulates (notably moose and mule deer). Taking into account the changes to habitat that would result from these projects and activities, the populations of furbearers and ungulates, while reduced, are likely to continue to persist on the landscape to the point where hunting and trapping is still permissible. The regional populations of waterfowl and game birds should remain relatively unchanged.

19.1.1 Potential Cumulative Effects of the Project on Current Use of Lands and Resources

The Project is unlikely to result in a cumulative adverse effect on the current use of lands and resources for traditional purposes.

19.1.2 Cumulative Effects Mitigation Measures

As the Project is unlikely to result in a cumulative adverse effect on the current use of lands and resources for traditional purposes, regional approaches to mitigation are not proposed.

19.7 Monitoring and Follow-up

Monitoring related to the effect of the Project on the current use of lands and resources for fishing is as follows:

- BC Hydro will consider community-based monitoring programs, which may involve incorporation of local, community or traditional knowledge, where potential effects and the effectiveness of mitigation measures on fishing opportunities are uncertain, provided a sound methodology with clear indicators and outcomes is delineated. BC Hydro is prepared to engage with Aboriginal groups to discuss potential community-based monitoring programs, such as programs intended to monitor the productivity and abundance of fish species.

Monitoring related to the effect of the Project on the current use of lands and resources for hunting is as follows:

- BC Hydro will consider community-based monitoring programs, which may involve incorporation of local, community or traditional knowledge, where potential effects and the effectiveness of mitigation measures on hunting opportunities are uncertain, provided a sound methodology with clear indicators and outcomes is delineated. BC Hydro is prepared to engage with Aboriginal groups to discuss potential community-based monitoring programs, such as programs intended to monitor the productivity and abundance of wildlife species.

Monitoring and follow-up programs dealing specifically with fish and fish habitat are described in Volume 2 Section 12 Fish and Fish Habitat. Monitoring and follow-up programs dealing specifically with vegetation and ecological communities are described in Volume 2 Section 13 Vegetation and Ecological Communities. Monitoring and follow-up dealing specifically with wildlife resources are described in Volume 2 Section 14 Wildlife Resources.

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