

### 8.13 CURRENT USE OF LAND AND RESOURCES FOR TRADITIONAL PURPOSES BY ABORIGINAL PERSONS

The Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons has been selected as a valued environmental component (VEC) in recognition of the current use the land and resources for traditional purposes by Aboriginal persons, and to assess the potential environmental effects of the Project as required by the *Canadian Environmental Assessment Act (CEAA)* and the Final Guidelines (NBENV 2009).

The lands of central New Brunswick have been, and are being, used by Aboriginal persons for traditional hunting, fishing, trapping, gathering, subsistence and related purposes. An Indigenous Knowledge Study (IKS) was prepared by Moccasin Flower Consulting Inc., on behalf of the St. Mary's First Nation, Woodstock First Nation, and Madawaska Maliseet First Nation (Moccasin Flower Consulting 2013). This Northcliff-sponsored study reports that land and resources near the Project area have been, and are being, used for traditional purposes by Maliseet First Nations.

The Project will result in the loss of access to, or use of, land and resources in the Project Development Area (PDA) and Local Assessment Area (LAA) (both terms are defined in Section 8.13.1.4 below) due to the physical presence of the Project facilities and associated exclusion zones. These potential interactions of the Project with the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons are of concern to Aboriginal communities in New Brunswick because they could result in a loss of access to, or use of, areas currently used for traditional purposes by Aboriginal persons. As required by CEAA, this VEC focuses on the environmental effects of the Project on the current use of lands and resources by Aboriginal persons to carry out their traditional activities; it does not consider potential infringement of the Project on Aboriginal and Treaty Rights, which is a matter for consideration by the Crown.

Aboriginal persons report that they use the lands and resources of the general area of the Project, but there are no features of the Project that would limit such use from occurring in nearby areas to the Project. The geographic extent of land and resources that will be used by the Project is small compared to the larger asserted Maliseet traditional territory (about 0.16% of the Crown land within that territory, and about 1.9% of the contiguous block of Crown land within which the Project is sited). Northcliff will work to optimize training, employment, and business opportunities of the Project for Aboriginal people. As well, as evidenced by the environmental effects assessment of other VECs, potential residual environmental effects to biophysical resources (e.g., fish, wildlife) will not be significant. Consequently, while there is the potential for residual environmental effects to the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons from the presence of the Project itself and the activities carried out in support of it, those environmental effects, including cumulative environmental effects, have been rated not significant.

### 8.13.1 Scope of Assessment

This section defines the scope of the environmental assessment of Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons in consideration of the nature of the regulatory setting, issues identified during First Nations engagement activities, potential Project-VEC interactions, and existing knowledge.

The Project Development Area (PDA, defined later) is located within the Nashwaak River watershed, a sub-watershed of the greater St. John River watershed, much of which is asserted by the Maliseet peoples to be part of their traditional territory. There are currently no First Nations communities located within or immediately near the PDA.

#### 8.13.1.1 Rationale for Selection of Valued Environmental Component, Regulatory Context, and Issues Raised During Engagement

Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons was selected as a VEC in recognition of the asserted Aboriginal and Treaty Rights of First Nations people in New Brunswick to use land and resources for traditional purposes, and to assess the potential environmental effects of the Project on the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons as required by the *Canadian Environmental Assessment Act (CEAA)* and the Final Guidelines (NBENV 2009). Further, the assessment will assist the federal and provincial Crown in fulfilling their duty to consult Aboriginal peoples regarding the Project.

The definition of environmental effect in *CEAA* includes “... (b)(iii) *the current use of lands and resources for traditional purposes by Aboriginal persons...*”. The EIA must therefore determine: if the land and/or resources directly affected by the Project are currently used by Aboriginal persons for traditional purposes; whether the Project will affect such current use (if occurring) resulting in a significant environmental effect; and if so, what mitigation will be implemented for demonstrated adverse environmental effects such that they would be rendered not significant. The Final Guidelines for the EIA of the Project (NBENV 2009) also require an assessment of the environmental effects of all aspects of the Project (including any associated infrastructure) on the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons.

Understanding the current use of land and resources for traditional purposes by Aboriginal persons requires knowledge of traditional and contemporary Aboriginal activities, including hunting, trapping, fishing, and gathering activities carried out by First Nations people for traditional purposes. New Brunswick Aboriginal communities were engaged by Northcliff through numerous means that were summarized in Section 4.3 of this EIA Report, including a First Nations EA Working Group that includes representatives of all First Nations in New Brunswick as well as Northcliff and the federal and provincial agencies. A summary of Aboriginal engagement activities undertaken as part of the EIA for the Project was provided in Section 4.3.1.2. These activities provided information that supported the selection of Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons as a VEC.

An Indigenous Knowledge Study (IKS) was prepared by Moccasin Flower Consulting Inc. on behalf of the St. Mary's First Nation, Woodstock First Nation, and Madawaska Maliseet First Nation (Moccasin Flower Consulting 2013) and funded by Northcliff. Indigenous knowledge is defined by Canada's Royal Commission on Aboriginal Peoples as “*oral culture in the form of stories and myths...coded and*

*organized by knowledge systems for interpreting information and guiding action...a dual purpose to manage lands and resources and to affirm and reinforce one's relationship to the earth and its inhabitants"* (Moccasin Flower Consulting 2013). Indigenous knowledge holders are those that possess an understanding of the geographic locales, including but not limited to familiarity of the surrounding water bodies, wildlife, and botanical and cultural landscapes. Indigenous knowledge is observational in nature, includes information passed on from generation to generation, and is a dynamic process, changing in parallel to changes to the landscape. The Project is located on provincial Crown land that was identified in the IKS as a place currently being used for traditional purposes, further supporting the identification of Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons as a VEC.

There were no specific issues or concerns raised by the general public or stakeholders in relation to Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons during engagement activities conducted as part of the Project. First Nations representatives expressed considerable interest in the Project during ongoing Aboriginal engagement activities carried out for the Project. The key issues and concerns raised included possible environmental effects on their current use of land and resources, and the need for a holistic approach to managing the environmental effects of the Project. Archaeological artifacts that might be present in the PDA (should any be discovered) were also thought to be of considerable importance to the First Nations identity, history, and culture, and an important contributor to traditional knowledge. To address these concerns, field programs included Aboriginal participation on field teams; discussions with First Nation knowledge holders were held to confirm findings and the extent and content of archaeological field programs; field visits to observe archaeological field work were offered; Aboriginal consultation was conducted in the issuance of Archaeological Field Research Permits; and considerable discussion with First Nations representatives and regulatory agencies was carried out to define and respond to these issues and concerns as part of the EIA and Project design.

The environmental assessment of the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons must therefore determine if the Project will affect such current use, and if so, must also describe mitigation for demonstrated significant adverse environmental effects on that current use.

#### **8.13.1.2 Selection of Environmental Effect and Measurable Parameters**

The environmental assessment of Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons is focused on the following environmental effect:

- Change in Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons.

The Project site is located in a rural, undeveloped area on provincial Crown land that was identified in the IKS as one of the largest pieces of contiguous Crown land in closest proximity to St. Mary's and Woodstock First Nations. Development of the Project may affect the ability of First Nations to access the lands and resources within the PDA and adjacent areas to carry out their traditional activities.

The measurable parameters used for the assessment of this environmental effect and the rationale for their selection are presented in Table 8.13.1.

**Table 8.13.1 Measurable Parameters for Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons**

Environmental Effect	Measurable Parameters	Rationale for Selection of the Measurable Parameter
Change in Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons	Change in the quantity of land and/or resources available for use for hunting, fishing or gathering by Aboriginal persons (area in hectares (ha) and as a percentage of the traditional territory).	<ul style="list-style-type: none"> <li>The Final Guidelines and Terms of Reference state that the environmental effect of the Project (including any associated infrastructure) on the current use of land and/or resources for traditional purposes by Aboriginal communities must be included in the assessment.</li> </ul>
	Change in the current use of land and resources by Aboriginal persons for traditional purposes (e.g., change in access to land and resources, or change in use patterns of the land and resources).	<ul style="list-style-type: none"> <li>A change in land or resources as a result of the development of the Project within the PDA may limit the ability of Aboriginal Persons to carry out their traditional activities.</li> </ul>

**8.13.1.3 Temporal Boundaries**

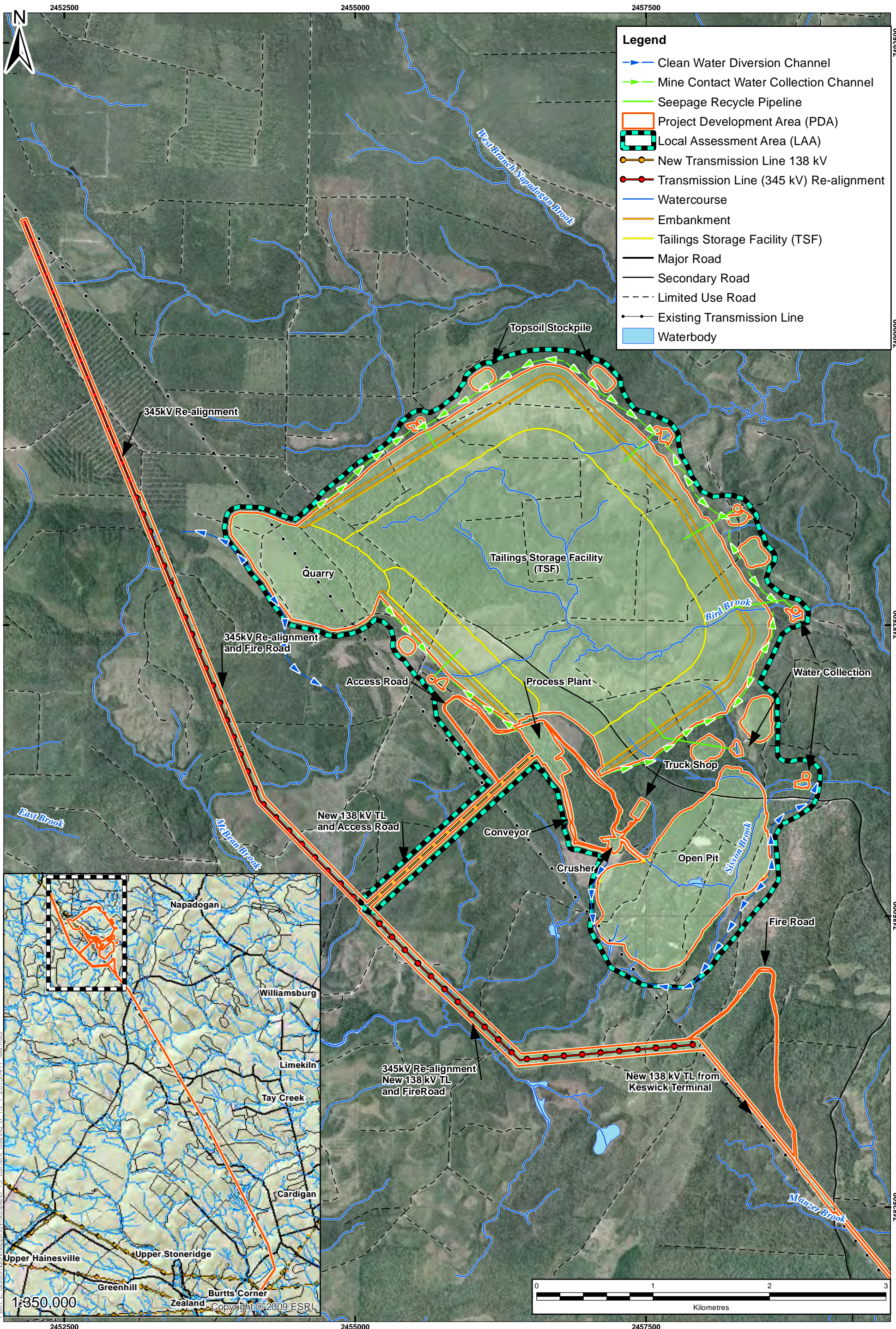
The temporal boundaries for the assessment of the potential environmental effects of the Project on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons include the three phases of Construction, Operation, and Decommissioning, Reclamation and Closure (including Post-Closure) of the Project.


The temporal boundaries for the establishment of existing conditions for the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons were for the period of November 2010 to June 2013 (at the time of writing), during which period First Nations engagement was conducted by Northcliff and an IKS was carried out through research as well as engagement of, and dialogue with, First Nations community members, leadership, knowledge holders, and Elders.

**8.13.1.4 Spatial Boundaries**

The spatial boundaries for the environmental effects assessment of Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons are defined below.

**Project Development Area (PDA):** The PDA is the most basic and immediate area of the Project, and consists of the area of physical disturbance associated with the Construction and Operation of the Project. Specifically, the PDA consists of an area of approximately 1,253 hectares (ha) that includes: the open pit; ore processing plant; storage areas; TSF; quarry; the relocated Fire Road and new Project access road, and new and relocated power transmission lines (Figure 8.13.1). The PDA is the area represented by the physical Project footprint as detailed in Chapter 3.



NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC PROJECT AND SHOULD NOT BE USED FOR OTHER PURPOSES.					
<b>Project Development Area (PDA), and Local Assessment Area (LAA) for Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons</b> Sisson Project: Environmental Impact Assessment (EIA) Report, Napadogan, N.B.		Scale: 1:30,000	Project No.: 121810356	Data Sources: NBDNR	Fig. No.: 8.13.1
Client: Northcliff Resources Ltd.	Date: (dd/mm/yyyy) 11/04/2013	Dwn. By: JAB	Appd. By: DLM		
Stantec Consulting Ltd. © 2013 <span style="float: right;">Map: NAD83 CSRS NB Double Stereographic</span>					



**Local Assessment Area (LAA):** The LAA is the maximum area within which Project-related environmental effects can be predicted or measured with a reasonable degree of accuracy and confidence. Though development of the Project will be limited to the PDA, some areas within and contiguous to the PDA will no longer be accessible by the public or First Nations upon initiating Construction of the Project, even though they will not necessarily be physically disturbed. In recognition of this, the LAA (Figure 8.13.1) for Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons consists of an area of 1,446 ha that includes the PDA and areas contiguous to the PDA for which public access will be restricted. The LAA represents the zone of influence of the Project on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons due to exclusion zones that will exist in these areas following Project development.

**Regional Assessment Area (RAA):** The RAA (Figure 8.13.2) is the area within which the Project's environmental effects may overlap or accumulate with the environmental effects of other projects or activities that have been or will be carried out. The RAA for the assessment of Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons is defined as the portion of the St. John River watershed that lies within the province of New Brunswick, which is generally thought to represent the portion of the traditional territory of the Wolastoqiyik (Maliseet) people that is contained within New Brunswick. The extent to which cumulative environmental effects for Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons may occur depends on physical and biological conditions and the type and location of other past, present, or reasonably foreseeable future projects or activities that have been or will be carried out, as defined within the RAA.

Collectively, the PDA, LAA and RAA comprise the “assessment area” for this VEC.

#### **8.13.1.5 Administrative and Technical Boundaries**

The administrative boundaries for Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons were summarized in Section 8.13.1.1 above, in terms of the legislative, regulatory and policy instruments at the provincial and federal level.

The evaluation of potential environmental effects of the Project on the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons is required by *CEAA*, under the definition of “environmental effect” in Section 2(1).

New Brunswick's First Nations assert Aboriginal and Treaty Rights under Section 35(1) of the *Constitution Act, 1982*. The Crown (federal and provincial) has a duty to consult with potentially affected First Nations in respect of decisions made by the Crown that might affect Aboriginal or Treaty Rights, including those that might relate to their current use of the land and resources for traditional purposes. The Maliseet and Mi'kmaq have asserted that all of New Brunswick makes up part of their traditional territories.

Consultation with First Nations must be conducted by the Crown (as represented by the federal and provincial governments) during the conduct of an EIA, with assistance provided by the proponent.

In compliance with the requirements of *CEAA* and the Final Guidelines, the EIA Report is intended to provide the Crown with information available about the potential environmental effects of the Project on the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons as well as any

measures taken or recommended that would mitigate such environmental effects. This information is useful in the provincial and federal Crown's consideration of its decisions relating to the Project, including assisting in carrying out their duty to consult Aboriginal peoples regarding the Project.

Technical boundaries relating to the assessment of Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons include the lack of a defined, documented body of knowledge concerning what lands or resources are currently being used by Aboriginal persons and communities for traditional purposes within the PDA, LAA, or the larger RAA. First Nation knowledge of current use of land and resources of the area for traditional purposes has been identified and obtained largely through discussion with Aboriginal persons, the IKS, engagement activities (e.g., First Nations EA Working Group, open houses), and submissions related to the Terms of Reference and through communication by word of mouth. Since this knowledge is largely obtained through engagement and through interviews with Aboriginal knowledge holders, this form of data collection presents a technical limitation as to the comprehensiveness of the information provided.

#### **8.13.1.6 Residual Environmental Effects Significance Criteria**

A significant adverse residual environmental effect on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons is defined as a long-term (more than 1 year) loss of the availability of, or access to, land and resources for use by Aboriginal persons for traditional purposes within the assessment area that cannot be mitigated. This includes an environmental effect that results in a long-term (more than 1 year) loss of the availability of, or access to, water resources, the aquatic environment, the terrestrial environment, the vegetated environment, the wetland environment, and heritage resources located within the assessment area that cannot be mitigated.

"Assessment area" is comprised of the PDA, LAA, and RAA, together which generally represents the traditional territory of the Wolastoqiyik (Maliseet) people in New Brunswick.

#### **8.13.2 Existing Conditions**

Existing conditions were established through engagement of the Aboriginal communities and their leadership. In addition, traditional knowledge and land use information is documented in an IKS (Moccasin Flower Consulting 2013) that describes traditional use of land and resources by Aboriginal Persons in and around the Project site.

In addition to the IKS, Northcliff commissioned an ethnohistorical study (Patterson 2012).

##### **8.13.2.1 First Nation Communities and Population in New Brunswick**

As reported in the ethnohistorical study, the Maliseet and Mi'kmaq Nations have been known to live and use the land and resources of New Brunswick for many centuries. The Maliseet are also known to be traditional hunters, trappers and gatherers, who travelled up and down the St. John River valley depending on the season to find sustenance and shelter, as well as in the Historic Period to trade with Europeans (Patterson 2012).





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**Legend**

- Project Development Area (PDA)
- Regional Assessment Area (RAA)\*
- Waterbody (NBHN)

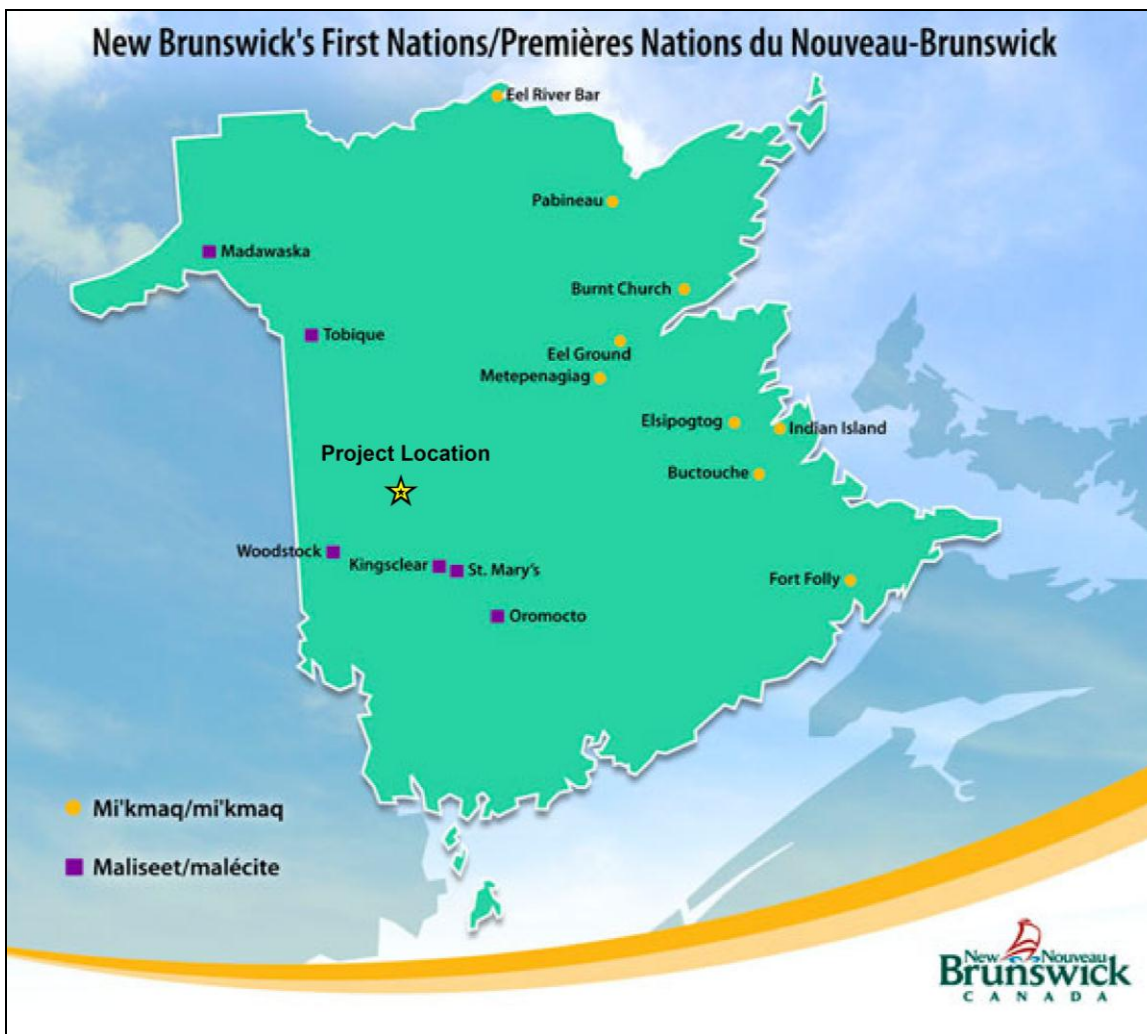


Sources: USGS, Esri, TANA, AND, National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, IPC

NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC PROJECT AND SHOULD NOT BE USED FOR OTHER PURPOSES.						
<b>Regional Assessment Area (RAA)</b> for Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons			Scale: 1:2,000,000	Project No.: 121810356	Data Sources: ESRI ArcGIS Online NHN NBADW	Fig. No.: 8.13.2
Sisson Project: Environmental Impact Assessment (EIA) Report, Napadogan, N.B.			Date: (dd/mm/yyyy) 14/03/2013	Dwn. By: JAB	Appd. By: DLM	 <b>Stantec</b>
Client: Northcliff Resources Ltd.			* Adapted from Goddard (1996)			



As shown in Figure 8.13.3, there are 15 First Nations communities within the province of New Brunswick, consisting of six Maliseet Nation communities and nine Mi'kmaq Nation communities. Maliseet communities are generally located along the St. John River valley, while the Mi'kmaq communities are predominantly located along the northern and eastern coastal regions of the province.



Source: www.GNB.ca, Aboriginal Affairs Secretariat.

**Figure 8.13.3 Location of New Brunswick First Nations Communities**

The closest First Nation communities to the Project are the St. Mary's First Nation, located approximately 47 km to the south of the mine site; the Kingsclear First Nation, located approximately 49 km to the south of the mine site; and the Woodstock First Nation, approximately 46 km to the west of the mine site.

The 2006 Census identified approximately 2.4% of the New Brunswick population as having Aboriginal identity, or the equivalent of 17,520 persons in New Brunswick. The population of Aboriginal persons on-reserve, as reported by Aboriginal Affairs and Northern Development Canada (AANDC 2013) is provided in Table 8.13.2.

**Table 8.13.2 Population of New Brunswick Maliseet and Mi'kmaq First Nation Communities, 2006**

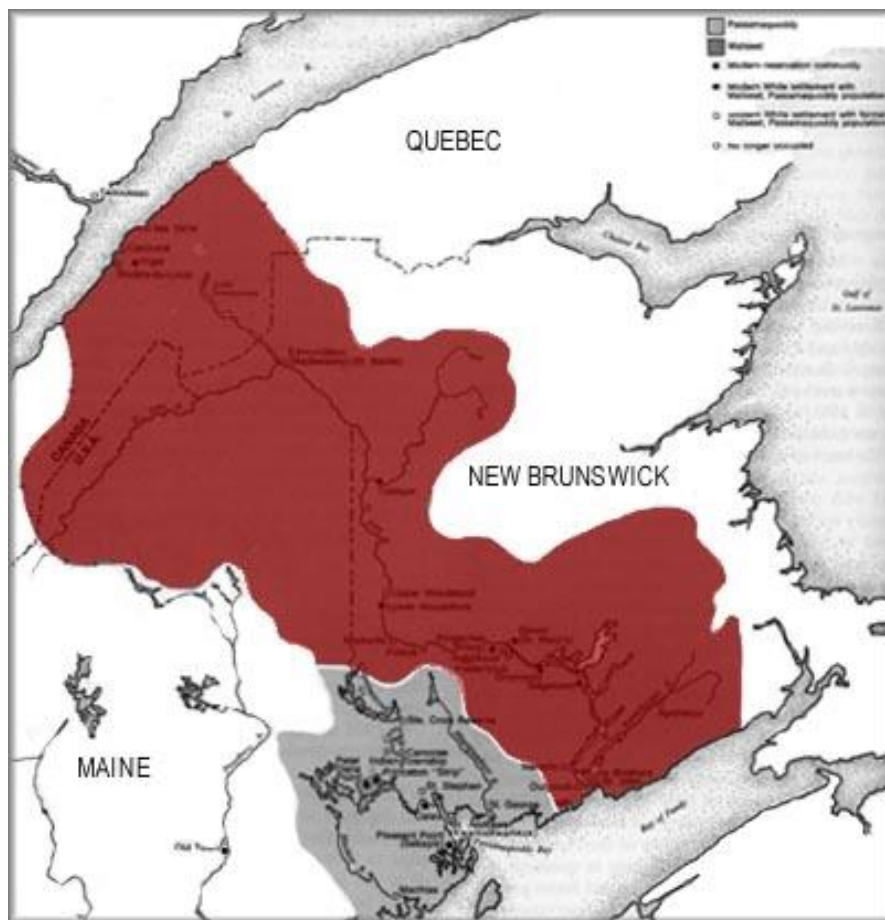
<b>First Nation Community</b>	<b>2006 Population (On-Reserve)</b>
<b>Maliseet First Nations in New Brunswick</b>	
Oromocto First Nation	636
St. Mary's First Nation	1,729
Kingsclear First Nation	961
Woodstock First Nation	941
Tobique First Nation	875
Madawaska Maliseet First Nation	165
<b>Sub-total</b>	<b>5,307</b>
<b>Mi'kmaq First Nations in New Brunswick</b>	
Eel River Bar First Nation	684
Pabineau First Nation	283
Esgenoopetitj First Nation	1,764
Metepenagiag First Nation	639
Eel Ground First Nation	983
Indian Island First Nation	176
Elsipogtog First Nation	3,116
Buctouche First Nation	111
Fort Folly First Nation	123
<b>Sub-total</b>	<b>7,879</b>
<b>Total On-Reserve First Nation Population in New Brunswick (2006)</b>	<b>13,186</b>

Source: AANDC (2013).

### 8.13.2.2 Traditional Territory

As shown in Figure 8.13.4, Maliseet traditional territory is understood to be comprised of the greater St. John River watershed as far north as the Gulf of St. Lawrence to Québec City, east through the state of Maine where it meets the Passamaquoddy territory, south to the Bay of Fundy, and west where it meets the neighboring Mi'kmaq nations (Goddard 1996).

Also known as the Wolastoqiyik, which means “people of the beautiful, good, pleasant river” after the Wolastoq River (*i.e.*, the St. John River), today the Maliseet people primarily live in western New Brunswick, with several smaller communities in northeastern Maine and southern Québec (Erickson 1996).



Source: Goddard (1996).

**Figure 8.13.4 Maliseet Traditional Territory**

**8.13.2.3 Indigenous Knowledge Study (IKS)**

First Nations use of the land and resources in the PDA and the area around it for hunting, fishing, trapping and gathering has been identified by First Nations’ community members at several of the engagement and public consultation forums hosted by Northcliff for the Project (summarized in Chapter 4).

The IKS (Moccasin Flower Consulting 2013) was commissioned by Northcliff to identify the land and resources currently used by the Maliseet First Nations for traditional purposes, and to identify what current use activities in the PDA may be affected by the Project. The scope of the IKS was designed to capture and record patterns of traditional, current, and possible future use of land and resources by Aboriginal persons and/or communities for traditional purposes. Data for the IKS was characterized through:

- historical research;
- field surveys;

- interviews and discussions with community knowledge holders; and
- mapping and recording of traditional uses, including sites and activities.

The approach of the IKS was designed such that discussion of past, present, and possible future land uses of the Regional Study Area (as it is referenced in the IKS, and defined as the large block of Crown land in central New Brunswick within which the Project is located) were captured. It is noted that the Regional Study Area as referred to in the IKS differs from the RAA defined in this EIA Report for assessment purposes. As discussed in the IKS, the entire Regional Study Area is characterized as being traditional hunting grounds of the Maliseet people. A brief summary of the main observations of the IKS follows. The reader is referred to the text of the IKS (Moccasin Flower Consulting 2013) for further context on the historical use of the area.

The Maliseet people continue to eat food that is considered to be traditional and to use resources from the local landscape for medicinal and ceremonial purposes. As noted in the IKS, *“A variety of tree species also continue to be harvested to make various pieces of Maliseet material culture such as black ash for baskets and cedar for furniture. Resources continue to be harvested for medicine (e.g., golden thread) and ceremony (e.g., sweet grass for smudge and alder for building sweat lodges).”* Cultural experiences such as participating in traditional activities reinforce the Maliseet relationship with their traditional territory and demonstrate the link between land and culture (Moccasin Flower Consulting 2013).

Information regarding traditional activities currently taking place within the general area of the Project was collected by Moccasin Flower Consulting through both interviews and field data. Several features were identified as confirmation of traditional activity currently taking place. These include the discussion and identification by study participants of several camps, fishing, hunting, cutting and gathering areas as well as areas identified as multi-use. Several species were identified as being hunted by the Maliseet within the general area of the Project, including moose, deer, partridge, woodcock, and rabbits. In addition, many brooks and lakes in the general area of the Project were identified as being used by study participants for fishing trout. Brooks and lakes used for fishing were identified in the IKS including Mud Lake, Napadogan Brook and its tributaries, Sisson Brook, and the Nashwaak River and its tributaries. In the IKS, salmon in the Nashwaak River watershed is described as one of the species most central to Maliseet livelihood and culture.

A member of the St. Mary's First Nation was identified as having a Crown lease camp approximately 1.3 km from the edge of the PDA. The camp has been used by this individual for over three decades, and is considered to be a community camp as it is frequently visited by St. Mary's members. In addition, other members of the St. Mary's First Nation also own camps in the area. Many members continue to use the area each year as for various traditional activities, and detail how their experiences are shared with the younger generation in order to help preserve their culture. Participants went on to explain the importance of their children having the opportunity to use the land just as they have used the land.

According to the IKS, Maliseet people continue to use the general area in the vicinity of the Project for traditional purposes to support their culture and livelihood (*i.e.*, harvesting of tree species and medicinal plants). Many continue to harvest, hunt and consume foods traditional to their diet, including but not limited to moose, deer, fish, fiddleheads, and berries. These and other traditional uses tend to occur in

close proximity to existing roads (Moccasin Flower Consulting 2013), presumably for ease of access. The general area of the Project is considered to be an important area to the Maliseet’s ability conduct traditional practices, and is considered to be one of the last remaining large areas accessible for traditional uses with a diverse number of resources (Moccasin Flower Consulting 2013).

In addition to the IKS, a more general Aboriginal Traditional Knowledge (ATK) study of endangered wildlife species of relevance to the Maliseet nation was also prepared by the Maliseet Nation Conservation Council (MNCC 2013), though it provides little information specific to the Project area.

**8.13.2.4 Forest Resource Harvesting**

The Province of New Brunswick has signed Aboriginal harvesting agreements with each of the 15 First Nation communities within the province. The agreements allocate 5% of the total provincial annual allowable harvest or cut (AAC) of Crown timber to First Nations. Wood allotment is on a province-wide basis and is not specific to a particular area or Crown timber license. Wood allotment and royalties are distributed on an annual basis among the First Nations according to community population.

**8.13.3 Potential Project-VEC Interactions**

Each of the Project’s planned activities during Construction, Operation and Decommissioning, Reclamation and Closure phases are listed below in Table 8.13.3 and are ranked as 0, 1, or 2 based on the activity’s potential interaction with Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons.

**Table 8.13.3 Potential Project Environmental Effects to Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons**

Project Activities and Physical Works	Potential Environmental Effects
	Change in Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons
<b>Construction</b>	
Site Preparation of Open Pit, TSF, and Buildings and Ancillary Facilities	2
Physical Construction and Installation of Project Facilities	1
Physical Construction of Transmission Lines and Associated Infrastructure	1
Physical Construction of Realigned Fire Road, New Site Access Road, and Internal Site Roads	2
Implementation of Fish Habitat Compensation Initiatives	1
Emissions and Wastes	0
Transportation	0
Employment and Expenditure	0
<b>Operation</b>	
Mining	1
Ore Processing	0
Mine Waste and Water Management	1
Linear Facilities Presence, Operation, and Maintenance	1
Emissions and Wastes	0
Transportation	0
Employment and Expenditure	0

**Table 8.13.3 Potential Project Environmental Effects to Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons**

Project Activities and Physical Works	Potential Environmental Effects
	Change in Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons
<b>Decommissioning, Reclamation and Closure</b>	
Decommissioning	0
Reclamation	1
Closure	1
Post-Closure	1
Emissions and Wastes	0
Transportation	0
Employment and Expenditure	0
<b>Project-Related Environmental Effects</b>	
<b>Notes:</b>	
Project-Related Environmental Effects were ranked as follows:	
0 No substantive interaction. The environmental effects are rated not significant and are not considered further in this report.	
1 Interaction will occur. However, based on past experience and professional judgment, the interaction would not result in a significant environmental effect, even without mitigation, or the interaction would clearly not be significant due to application of codified practices and/or permit conditions. The environmental effects are rated not significant and are not considered further in this report.	
2 Interaction may, even with codified mitigation and/or permit conditions, result in a potentially significant environmental effect and/or is important to regulatory and/or public interest. Potential environmental effects are considered further and in more detail in the EIA.	

There are two Project activities with the greatest potential interaction with Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons. These are:

- **During Construction:** Site Preparation of Open Pit, TSF, and Buildings and Ancillary Facilities; and
- **During Construction:** Physical Construction of Realigned Fire Road, New Site Access Road, and Internal Site Roads.

The potential interaction of these two activities with the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons has been ranked as 2 in Table 8.13.3 and has been considered further in the environmental effects assessment in Section 8.13.4 below. The potential environmental effects to the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons would begin as soon as these two activities are initiated. Though any environmental effects that occur in this regard would continue throughout the Project life, the greatest potential for environmental effects may potentially occur upon initiating Construction activities starting with site preparation, after which time the land or resources of the PDA and LAA would no longer be available for continuing any current use of land and resources for traditional purposes. The potential environmental effects on Current Use of Land and Resources for Traditional Purposes by Aboriginal persons are thus conservatively assessed as occurring immediately when Site Preparation begins; following this, while those environmental effects would continue throughout the Project life (though potentially reversed to some extent following Closure), the magnitude of those effects would be no greater, or less, than when they first occur in Construction.



### Activities Ranked as 0

Activities ranked as 0 in Table 8.13.3 include:

- **During Operation:** the activity of Ore Processing;
- **During Decommissioning, Reclamation and Closure:** the activity of Decommissioning; and
- **During all phases:** the activities of Emissions and Wastes, Transportation, and Employment and Expenditure.

Ore Processing during Operation will involve the operation of the ore processing plant and the production of mineral products for markets. These activities will occur within the ore processing plant and there will be no interaction between the internal processes at the established facility and current use of the PDA as the area will be restricted at the onset of Construction and no current use of the land and resources within the PDA will be permitted for safety reasons. Thus, there is no interaction from this activity with Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons that has not already been accounted for in the loss of land and resources during Construction. The potential interaction of Ore Processing on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons is thus ranked as 0 and is not considered further in this assessment.

At the onset of Construction and throughout the Operation and ultimate Decommissioning, Reclamation and Closure of the Project, Emissions and Wastes will be generated as a result of Project Activities. There will be no direct interaction between Emissions and Wastes and the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons, however. The public will not be allowed access to the LAA for security and safety purposes, and thus the land or resources in the LAA will no longer be accessible for any current use activities. Emissions and Wastes (e.g., dust, noise, mine contact water, and mining wastes) during each Project phase will be largely confined to the LAA and are not significant (as concluded in Sections 8.2 to 8.5), and thus no interaction with current use activities is anticipated. The environmental effects of Emissions and Wastes on the Aquatic, Terrestrial, Vegetated, and Wetland Environments, including the suitability of use of those resources for human use, are assessed in Sections 8.5, 8.6, 8.7, and 8.8 respectively, and were rated not significant. The potential interaction of Emissions and Wastes during all Project phases on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons is thus ranked as 0 and is not considered further in this assessment.

Transportation activities during all Project phases will be limited to the existing public highways and forest resource roads already established by the forestry industry. The movement of equipment and personnel to and from the PDA is limited to the use of this existing road infrastructure. Therefore no interaction between Project-related Transportation and the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons will take place as there is no current use of land and resources for traditional purposes within the footprint of the existing road infrastructure, though this existing infrastructure is used for access by Aboriginal persons. The potential interaction of Transportation during all Project phases on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons is thus ranked as 0 and is not considered further in this assessment. The potential environmental effects of the Project on Transportation generally, including the use of the

road network by the public (which also includes Aboriginal persons), are assessed in Section 8.15 and are rated not significant.

No interactions between Employment and Expenditure and the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons have been identified for any Project phase. By definition, Employment and Expenditure includes the procurement of equipment, supplies and materials, taxation and royalties, and employment and income as related to the Project. First Nations people may benefit from the economic activity from the Project generally (along with other New Brunswick residents), but the Project-related Employment and Expenditure will not affect the ability of First Nations people to hunt, fish, gather, or carry out other traditional activities. The potential interaction of Employment and Expenditure on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons is thus ranked as 0 and is not considered further in this assessment. Economic effects related to the Project are assessed in Section 8.10 (Labour and Economy) and are rated not significant to positive.

Decommissioning activities will involve the removal of Project-related facilities at the end of the Project life. These activities will not result in any additional ground breaking in areas not previously disturbed outside of the Project footprint during Construction and Operation, and the removal of these facilities will not interfere with the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons. The potential interaction of Decommissioning on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons is thus ranked as 0, and is not considered further in this assessment.

### Activities Ranked as 1

Project activities ranked as 1 in Table 8.13.3 may result in an interaction with the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons, however the interaction will be limited and not result in a significant environmental effect. These include:

- **During Construction:** the activities of Physical Construction and Installation of Project Facilities, Physical Construction of Transmission Lines and Associated Infrastructure, and Implementation of Fish Habitat Compensation Initiatives;
- **During Operation:** the activities of Mining, Mine Waste and Water Management, and Linear Facilities, Presence, Operation, and Maintenance; and
- **During Decommissioning, Reclamation and Closure:** the activities of Reclamation, Closure, and Post-Closure.

Physical Construction and Installation of Project Facilities may interact with the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons, but will occur within the area assessed under Site Preparation of Open Pit, TSF, and Buildings and Ancillary Facilities and Physical Construction of Realigned Fire Road, New Site Access Road, and Internal Site Roads (which are ranked as 2 and assessed further in Section 8.13.4). Thus, there is no need to carry a redundant consideration of Physical Construction and Installation of Project Facilities forward in the assessment.

Some limited potential interaction with Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons may occur with Physical Construction of Transmission Line and Associated Infrastructure (for the construction of the new 138 kV transmission line and the relocated 345 kV transmission line), but to a much lesser extent than at the mine site itself given the limited physical disturbance associated these developments; the interaction with these activities has thus been ranked as 1. Although this activity will disrupt any current or future use of lands or resources by Aboriginal Persons for traditional purposes within the PDA, this restricted use will be limited temporally (less than one year) and to a relatively small footprint within the PDA where these linear facilities will be built. Current uses of lands for traditional purposes within the LAA are generally limited to hunting, fishing, and some camping, all which tend to occur in close proximity to existing roads (Moccasin Flower Consulting 2013), presumably for ease of access. There are no such uses that are unique to the LAA, and hunting, fishing, and camping occur throughout the RAA as documented in the IKS. The potential interactions of Physical Construction of Transmission Lines and Associated Infrastructure on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons are thus ranked as 1, and are not considered further in this assessment.

During Construction, Implementation of Fish Habitat Compensation Initiatives, as proposed by Northcliff, will involve limited disturbance of undeveloped land to access the Lower Lake Dam for removal, but is not expected to result in an interaction with Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons that could be considered significant. If any ground disturbing activities are required along the shorelines of the Nashwaak River as part of the HADD compensation work, the shore area will be assessed for any archaeological potential, including potential existence of burials, or settlements. Since the removal of this dam is intended to improve fish passage in the Nashwaak River, the improvement, to the extent that it occurs, would have a positive environmental effect on Current Use of Land and Resources for Traditional Purposes by Aboriginal Person, specifically by improving access to or the productivity of the fisheries resource that form part of an Aboriginal fishery in the RAA. The potential interaction of Implementation of Fish Habitat Compensation Initiatives on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons is thus ranked as 1, and is not considered further in this assessment.

During Operation, the three activities of Mining, Mine Waste and Water Management, and Linear Facilities, Presence, Operation, and Maintenance will likely interact with Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons by restricting access to the LAA such that any traditional use of land or resources within the LAA will no longer be possible. The interactions, however, will not result in a significant environmental effect as restricted site access will begin at the onset of Construction, and will not cause an additional change to the area beyond that which occurred already during Site Preparation and which will continue throughout the Project life. Thus, the potential interactions of Mining, Mine Waste and Water Management, and Linear Facilities, Presence, Operation, and Maintenance activities on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons are thus ranked as 1, and are not considered further in this assessment.

During the Decommissioning, Reclamation and Closure phase, the three activities of Reclamation, Closure, and Post-Closure are expected to interact with Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons. The interactions, however, will be positive, as these activities may restore much of the PDA to conditions similar to a largely pre-development state, including providing resumed access to portions of the PDA for carrying out traditional Aboriginal land

and resource use activities. In addition, areas will be re-vegetated with plant species native to the area. The potential interactions of Reclamation, Closure, and Post-Closure on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons are thus ranked as 1, and are not considered further in this assessment.

#### **Summary for Activities Ranked as 0 or 1**

Thus, in consideration of the nature of the interactions and the planned implementation of known and proven mitigation, the potential environmental effects of all Project activities and physical works that were ranked as 0 or 1 in Table 8.13.3, including cumulative environmental effects, on the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons during any phase of the Project are rated not significant, with a high level of confidence. They are not considered further in this assessment.

#### **8.13.4 Assessment of Project-Related Environmental Effects**

A summary of the environmental effects assessment and prediction of potential residual environmental effects resulting from interactions ranked as 2 on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons is provided in Table 8.13.4.

**Table 8.13.4 Summary of Residual Project-Related Environmental Effects on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons**

Potential Residual Project-Related Environmental Effects	Project Phases, Activities, and Physical Works	Mitigation / Compensation Measures	Residual Environmental Effects Characteristics						Significance	Prediction Confidence	Likelihood	Cumulative Environmental Effects?	Recommended Follow-up or Monitoring
			Direction	Magnitude	Geographic Extent	Duration and Frequency	Reversibility	Ecological/Socioeconomic Context					
Change in Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons	<p>Construction</p> <ul style="list-style-type: none"> <li>• Site Preparation of Open Pit, TSF, and Buildings and Ancillary Facilities.</li> <li>• Physical Construction of Realigned Fire Road, New Site Access Road, and Internal Site Roads.</li> </ul>	<ul style="list-style-type: none"> <li>• Continued on-going engagement of First Nations will occur throughout the EIA, to develop a sustainable, economically viable and responsible management and reclamation plans for the Project.</li> <li>• Forestry management plans will be revised by Crown licensees to incorporate the harvesting of forestry resources in the PDA as part of Site Preparation. Northcliff will provide information to Crown licensees (including Aboriginal licensees) well in advance of Construction to facilitate planning in collaboration with NBDNR.</li> <li>• Northcliff will work with First Nations and appropriate government agencies to facilitate the harvesting of resources used for traditional purposes in the PDA prior to site preparation activities (where reasonable within the timeframe of planned activities).</li> <li>• Reclamation of the PDA will consider traditional resources, to ensure the land is accessible for traditional purposes post closure of the Project.</li> </ul>	A	L	S	LT/C	R	U	N	H	-	Y	None recommended.

**Table 8.13.4 Summary of Residual Project-Related Environmental Effects on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons**

Potential Residual Project-Related Environmental Effects	Project Phases, Activities, and Physical Works	Mitigation / Compensation Measures	Residual Environmental Effects Characteristics						Significance	Prediction Confidence	Likelihood	Cumulative Environmental Effects?	Recommended Follow-up or Monitoring
			Direction	Magnitude	Geographic Extent	Duration and Frequency	Reversibility	Ecological/Socioeconomic Context					
		<ul style="list-style-type: none"> <li>Northcliff will work to optimize training, employment, and business opportunities of the Project for Aboriginal people.</li> </ul>											
	Operation												
	Decommissioning, Reclamation and Closure												
	Residual Environmental Effects for All Phases							N	H	-	Y		

**Table 8.13.4 Summary of Residual Project-Related Environmental Effects on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons**

Potential Residual Project-Related Environmental Effects	Project Phases, Activities, and Physical Works	Mitigation / Compensation Measures	Residual Environmental Effects Characteristics						Significance	Prediction Confidence	Likelihood	Cumulative Environmental Effects?	Recommended Follow-up or Monitoring
			Direction	Magnitude	Geographic Extent	Duration and Frequency	Reversibility	Ecological/Socioeconomic Context					
<p><b>KEY</b></p> <p><b>Direction</b>                      P Positive.                      A Adverse.</p> <p><b>Magnitude</b>                      L Low: No net loss of current use of land and resources for traditional purposes by Aboriginal persons that is not mitigated.                      M Moderate: A nominal loss, or a substantive loss that is mitigated, in the availability or access to land and/or resources currently used for traditional purposes by Aboriginal persons.                      H High: An unmitigated, substantive and permanent loss in the availability or access to land and/or resources currently used for traditional purposes by Aboriginal persons.</p> <p><b>Geographic Extent</b>                      S Site-specific: Within the PDA.                      L Local: Within the LAA.                      R Regional: Within the RAA.</p> <p><b>Duration</b>                      ST Short-term: Occurs and lasts for short periods (e.g., days/weeks).                      MT Medium-term: Occurs and lasts for less than one year.                      LT Long-term: Occurs during Construction and/or Operation and lasts for the life of Project.                      P Permanent: Occurs during Construction and continues beyond completion of Decommissioning, Reclamation and Closure activities.</p> <p><b>Frequency</b>                      O Occurs once.                      S Occurs sporadically at irregular intervals.                      R Occurs on a regular basis and at regular intervals.                      C Continuous.</p> <p><b>Reversibility</b>                      R Reversible.                      I Irreversible.</p> <p><b>Ecological/Socioeconomic Context</b>                      U Undisturbed: Area relatively or not adversely affected by human activity.                      D Developed: Area has been substantially previously disturbed by human development or human development is still present.                      N/A Not Applicable.</p> <p><b>Significance</b>                      S Significant.                      N Not Significant.</p> <p><b>Prediction Confidence</b>                      Confidence in the significance prediction, based on scientific information and statistical analysis, professional judgment and known effectiveness of mitigation:                      L Low level of confidence.                      M Moderate level of confidence.                      H High level of confidence.</p> <p><b>Likelihood</b>                      If a significant environmental effect is predicted, the likelihood of that significant environmental effect occurring, based on professional judgment:                      L Low probability of occurrence.                      M Medium probability of occurrence.                      H High probability of occurrence.</p> <p><b>Cumulative Environmental Effects?</b>                      Y Potential for environmental effect to interact with the environmental effects of other past, present or foreseeable projects or activities in RAA.                      N Environmental effect will not or is not likely to interact with the environmental effects of other past, present or foreseeable projects or activities in RAA.</p>													

#### **8.13.4.1 Potential Project Environmental Effects Mechanisms**

Any Project components or activities that result in a change in the amount of land available to practice current use activities, or in restricted access to an area that limits the use of the resources found in that area, can affect the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons.

Site Preparation through clearing, grubbing, levelling, and other earth moving activities, as well as the implementation of site access restrictions for safety and security reasons, will result in a long-term loss of access to land and resources in the LAA, which will continue until the completion of decommissioning and reclamation activities, and beyond in those areas where changes in the environment will be permanent. Such resources and their use may be restored following Closure.

#### **8.13.4.2 Mitigation of Project Environmental Effects**

This VEC links with other VECs where biophysical resources may be affected by the Project, thereby potentially diminishing the quality and quantity of land and resources available for Aboriginal people to use for traditional purposes. Considerable discussion of the potential environmental effects on resources and associated mitigation measures are outlined in Sections 8.4 (Water Resources), 8.5 (Aquatic Environment), 8.6 (Terrestrial Environment), 8.7 (Vegetated Environment), 8.8 (Wetland Environment), and 8.14 (Heritage Resources), and these mitigation measures are also applicable to this particular VEC. In addition to the mitigation measures described in those sections, the following mitigation measures, through careful design and planning, will be employed to avoid or reduce the environmental effects of the Project on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons potentially resulting from the environmental effects mechanisms described above.

- Continued on-going engagement will occur with First Nations to develop sustainable, economically viable and responsible management and reclamation plans for the Project.
- Forestry management plans will be revised by Crown licensees to incorporate the harvesting of forestry resources in the PDA as part of Site Preparation. Northcliff will provide information to Crown licensees (including Aboriginal licensees) well in advance of Construction to facilitate planning in collaboration with NBDNR.
- Northcliff will work with First Nations and appropriate government agencies to provide the opportunity to harvest resources used for traditional purposes in the PDA prior to site preparation activities (where reasonable within the timeframe of planned activities).
- Reclamation of the PDA will consider traditional resources to ensure the land is accessible for traditional purposes following closure of the Project.
- Northcliff will work to optimize training, employment, and business opportunities of the Project for Aboriginal people.

As further mitigation for the potential environmental effects of the Project on the Current Use of Land and Resources for Traditional Purposes by Aboriginal Purposes, Northcliff is committed to continuing



engagement of, and dialogue with, First Nations about the Project and its potential environmental effects throughout the life of the Project and into Closure.

#### 8.13.4.3 Characterization of Residual Project Environmental Effects

The presence of Project-related facilities and infrastructure will interact with Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons by limiting access to the LAA for these uses. The Project lies on provincial Crown land, within the asserted traditional Maliseet territory. Some traditional land uses, including hunting, fishing, camping, and timber harvesting are reported to be carried out along existing roads within the LAA (Moccasin Flower Consulting 2013), as they likely are throughout the surrounding areas. Careful design of Project-related facilities and infrastructure will ensure that the size of the PDA will be limited to the area necessary for safe and efficient operation of the mine.

There are 8,902 km<sup>2</sup> of Crown land within the New Brunswick portion of the St. John River valley (*i.e.*, within the RAA), of which the Project LAA is 14.46 km<sup>2</sup> or approximately 0.16% (Figure 8.13.5). Given the relatively small size of the LAA in comparison to the much larger RAA, the access and availability of similar land and resources within the larger RAA will not be impeded nor will the Project substantively interfere with traditional Aboriginal activities currently practiced in the rest of the RAA.

The IKS identified the concern that the Project will interrupt a large area of contiguous Crown land, and First Nations assert that this area is the largest block of Crown land available to the proximal First Nation communities in the RAA (Moccasin Flower Consulting 2013). The LAA is located within a contiguous 768 km<sup>2</sup> area of Crown land in the RAA, and is approximately 1.9% of it (Figure 8.13.6). As noted in other VECs (*e.g.*, Terrestrial Environment, Vegetated Environment), there are no features of the LAA that are unique in terms of habitat, presence of wildlife, or presence of species at risk or species of conservation concern; the loss of access to land or resources in the LAA therefore does not affect the current use of land and resources for traditional purposes by Aboriginal persons in a substantive way as these resources are available in other nearby parts of the RAA. Even with this loss of access to Crown land in the LAA, First Nations will still be provided with the same proportion of the annual allowable cut within the province (*i.e.*, no change to the 5% of province-wide AAC allocated to First Nations), and as such the Project will not adversely affect Aboriginal harvesting of timber on Crown land.

Ongoing engagement with the First Nations communities will continue to take place, as well as their inclusion and participation in the development of management and reclamation plans, and perhaps active involvement in reclamation activities at the site. Nonetheless, a reduction in the use of land, or the resources on the land within the LAA, is unavoidable throughout the life of the Project, and to some extent after Closure activities are complete and in perpetuity.

Minor potential environmental effects on the Aquatic, Terrestrial, Vegetated, and Wetland Environments have been assessed in Sections 8.5, 8.6, 8.7, and 8.8, respectively, as a result of ground disturbing activities necessary during Construction. The potential environmental effects will likely be partially reversible through habitat compensation and re-vegetation of the PDA upon Closure that will partially restore habitat conditions in the LAA, except for the open pit and much of the TSF.

The Project will unavoidably result in a loss of access to land and resources in the LAA that are identified in the IKS as being used by Aboriginal persons for traditional purposes; however, the LAA does not contain any unique features or ecological characteristics that would not be accessible in the Crown land and resources of the surrounding RAA.

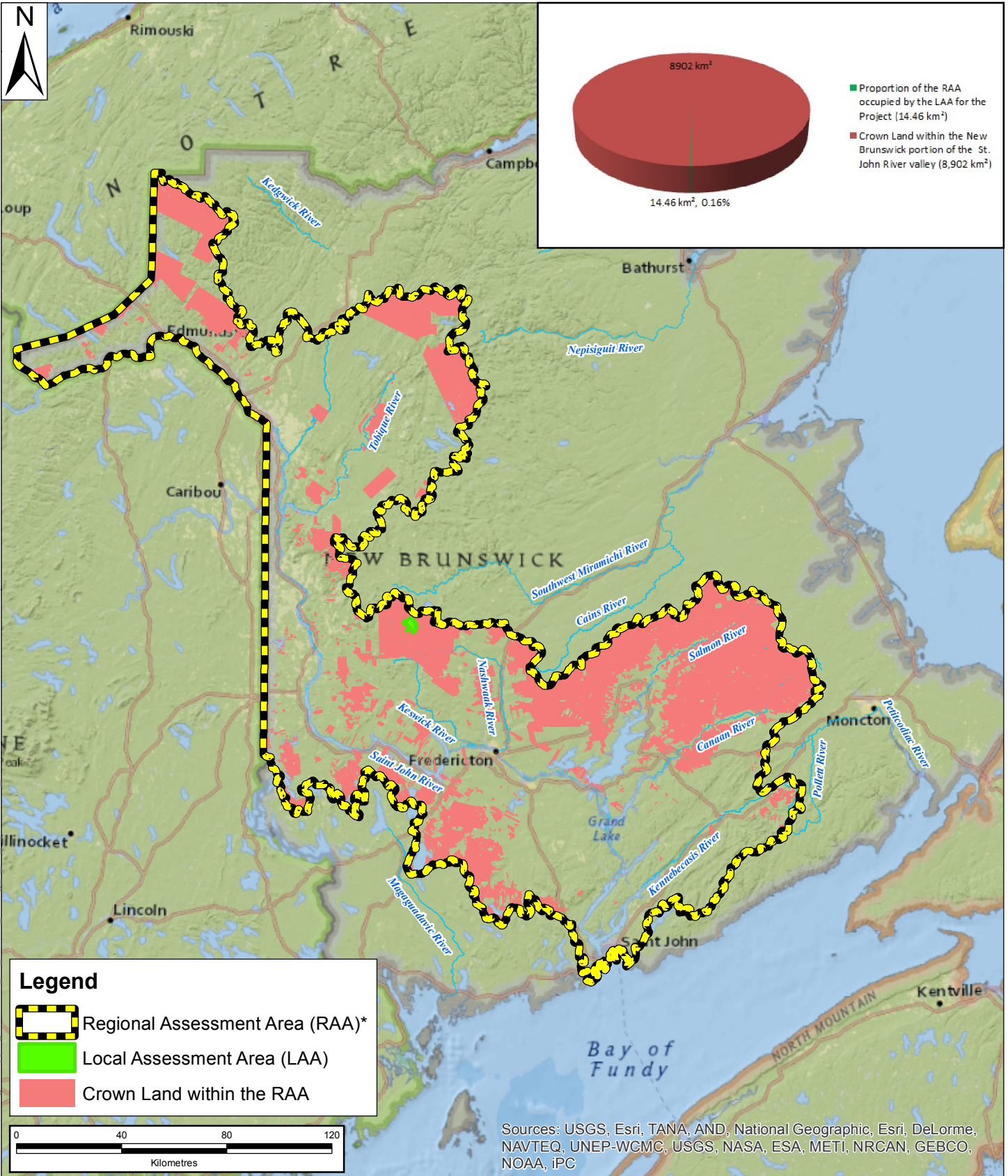
Northcliff will work to optimize training, employment and business opportunities of the Project for Aboriginal people.

### 8.13.5 Assessment of Cumulative Environmental Effects


In addition to the Project environmental effects discussed above, an assessment of the potential cumulative environmental effects was conducted for other projects or activities that have potential to cause environmental effects that overlap with those of the Project, as identified in Table 8.13.3. Table 8.13.5 below presents the potential cumulative environmental effects to Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons, and ranks each interaction with those other projects or activities as 0, 1, or 2 with respect to the nature and degree to which Project-related environmental effects overlap with those of other projects or activities.

**Table 8.13.5 Potential Cumulative Environmental Effects to Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons**

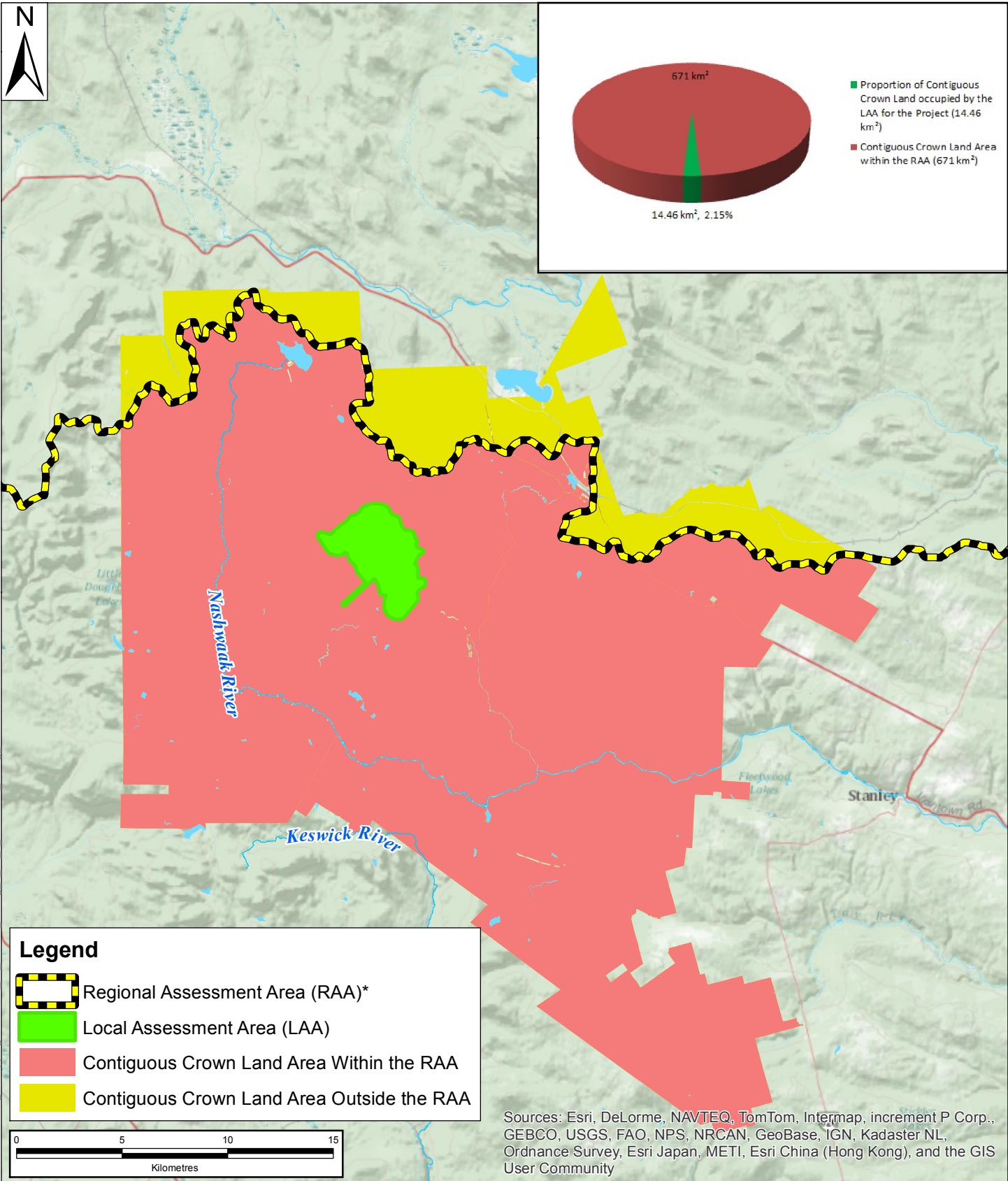
Other Projects and Activities With Potential for Cumulative Environmental Effects	Potential Cumulative Environmental Effects
	Change in Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons
<b>Past or Present Projects or Activities That Have Been Carried Out</b>	
Industrial Land Use (Past or Present)	0
Forestry and Agricultural Land Use (Past or Present)	0
Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons (Past or Present)	0
Recreational Land Use (Past or Present)	0
Residential Land Use (Past or Present)	0
<b>Potential Future Projects or Activities That Will Be Carried Out</b>	
Industrial Land Use (Future)	0
Forestry and Agricultural Land Use (Future)	1
Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons (Future)	0
Recreational Land Use (Future)	0
Planned Residential Development (Future)	0
<b>Cumulative Environmental Effects</b>	
<b>Notes:</b>	
Cumulative environmental effects were ranked as follows:	
0 Project environmental effects do not act cumulatively with those of other projects or activities that have been or will be carried out.	
1 Project environmental effects act cumulatively with those of other projects or activities that have been or will be carried out, but are unlikely to result in significant cumulative environmental effects; or Project environmental effects act cumulatively with existing significant levels of cumulative environmental effects but the Project will not measurably contribute to these cumulative environmental effects on the VEC.	
2 Project environmental effects act cumulatively with those of other projects or activities that have been or will be carried out, and may result in significant cumulative environmental effects; or Project environmental effects act cumulatively with existing significant levels of cumulative environmental effects and the Project may measurably contribute to adverse changes in the state of the VEC.	



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NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC PROJECT AND SHOULD NOT BE USED FOR OTHER PURPOSES.					
Proportion of the Regional Assessment Area (RAA) Occupied by the Local Assessment Area (LAA) for the Project  Sisson Project: Environmental Impact Assessment (EIA) Report, Napadogan, N.B.	Scale:	Project No.:	Data Sources:	Fig. No.:	 <b>Stantec</b>
	1:2,000,000	121810356	ESRI ArcGIS Online NHN NBADW	8.13.5	
Client: Northcliff Resources Ltd.	Date: (dd/mm/yyyy) 15/05/2013	Dwn. By: JAB	Appd. By: DLM	* Adapted from Goddard (1996)	





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Sources: Esri, DeLorme, NAVTEQ, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), and the GIS User Community

<p>NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC PROJECT AND SHOULD NOT BE USED FOR OTHER PURPOSES.</p>					
<p>Proportion of Contiguous Crown Land Occupied by the Local Assessment Area (LAA) for the Project</p> <p>Sisson Project: Environmental Impact Assessment (EIA) Report, Napadogan, N.B.</p>	<p>Scale:</p> <p>1:250,000</p>	<p>Project No.:</p> <p>121810356</p>	<p>Data Sources:</p> <p>ESRI ArcGIS Online NHN NBADW</p>	<p>Fig. No.:</p> <p>8.13.6</p>	
	<p>Date:</p> <p>23/05/2013</p>	<p>Dwn. By:</p> <p>JAB</p>	<p>Appd. By:</p> <p>DLM</p>	<p>Client:</p> <p>Northcliff Resources Ltd.</p>	



The environmental effects of the Project in combination with those of Industrial Land Use (Past or Present), Forestry and Agricultural Land Use (Past or Present), Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons (Past or Present), Recreational Land Use (Past or Present), and Residential Land Use (Past or Present) have been ranked as 0 in Table 8.13.5. These past or present land uses form the basis of the existing conditions that were considered as part of this VEC, and the existing conditions by definition encompass the past and present environmental effects on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons. Particularly, Forestry and Agricultural Land Use (Past or Present) on Crown Land is undertaken in consideration of the mitigation and protection of Aboriginal land and resource use. Thus, they require no additional consideration in terms of overlapping potential for cumulative environmental effects with the Project.

The environmental effects of the Project in combination with those of Industrial Land Use (Future), Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons (Future), Recreational Land Use (Future), and Planned Residential Development (Future) have also been ranked as 0 in Table 8.13.5. The environmental effects of future Industrial Land Use in combination with those of the Project have been ranked as 0 in Table 8.13.5 because planned Industrial Land Use is limited within the RAA, and any such development would likely be primarily located on private land as opposed to Crown land. Similarly, the environmental effects of Planned Residential Development and those of the Project on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons has been ranked as 0 in Table 8.13.5 since Planned Residential Development is limited within the RAA, and would be located on private land.

Recreational Land Use does not limit the availability or accessibility of land for its use by Aboriginal persons for traditional uses. As such, no interactions between the environmental effects of future Recreational Land Use and those of the Project on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons are anticipated, and the interaction has thus been ranked as 0 in Table 8.13.5.

When it occurs on Crown land, future Forestry and Agricultural Land Use may interact with Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons by changing vegetation and removing resources. These activities are not anticipated to substantively limit access to land in the RAA. Forestry will remove timber resources, but will also replant trees that will be available for use by Aboriginal persons. Additionally, as previously noted, First Nations will continue to be allocated 5% of the provincial annual allowable cut of timber on Crown land. Forestry and agriculture are generally prohibited within 30 m of watercourses, thus interactions with Aboriginal fishing activities are not anticipated. As discussed in the IKS, current use of land and resources for traditional purposes by Aboriginal persons generally occurs along or in close proximity to existing forestry roads. As such, future forestry is likely to improve access to areas of Crown land, thus improving its access and ease of use by First Nations. Accordingly, the interaction between the environmental effects of future Forestry and Agriculture Land Use and those of the Project is ranked as 1 in Table 8.13.5.

### **8.13.6 Determination of Significance**

#### **8.13.6.1 Residual Project Environmental Effects**

Given the proposed mitigation for environmental effects of the Project discussed in other VECs, the lack of unique habitat or resources within the LAA, and the abundance of Crown land and resources available within the RAA, the potential residual environmental effects of the Project on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons during all phases of the Project are rated not significant. Northcliff will work to optimize the benefits of the Project for Aboriginal people, including training, employment, and business opportunities. This conclusion has been made with a high level of confidence as the Project will be located in a relatively small footprint, and traditional activities carried out within the LAA are also carried out throughout the RAA. As well, much of the PDA will be available for traditional uses post-closure of the Project, potentially restoring the access to or use of those areas for traditional purposes. Other areas of the RAA will continue to offer similar land and resources within the larger area to enable the ongoing pursuit of Aboriginal land and resource use for traditional purposes.

#### **8.13.6.2 Residual Cumulative Environmental Effects**

Since there are no significant potential environmental effects of the Project on the Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons within the defined assessment area, and the management of Crown Land in a way that reflects and mitigates Aboriginal interests (e.g., 5% of AAC devoted to First Nations), it follows that the overlapping environmental effects of the Project in combination with other projects or activities that have been or will be carried out are mitigated such that they are not significant. As such, the potential residual cumulative environmental effects of the Project in combination with other projects or activities that have been or will be carried out on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons during all Project phases are rated not significant. This determination has been made with a high level of confidence.

#### **8.13.7 Follow-up or Monitoring**

No follow-up or monitoring is recommended for potential environmental effects on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons.