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.

The Project will result in the temporary or permanent loss of a portion of 1,446 ha of Crown land that is within the traditional territory of the Maliseet First Nations. Aboriginal persons report that they use the lands and resources of the general area of the Project, and within the Project site. 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), and the Project site contains no resources that are not common throughout the encompassing contiguous Crown land block. SML 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/SML 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/SML 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 being involved in the planning and review of 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 (including particularly concerns relating to environmental effects on species of importance to Aboriginal people, such as Atlantic salmon and moose), and the need for a holistic approach to managing the environmental effects of the Project. The discovery of archaeological artifacts in the PDA (Section 8.14) was 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; a Heritage Mitigation Plan was developed (Section 8.14); and SML funded First Nations monitors and a First Nations archaeologist on-site. Considerable discussion with First Nations representatives and regulatory agencies was carried out and continues to be carried out to discuss the archaeological program and respond to any issues and concerns as part of the EIA and subsequent Project design process.

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 will affect the ability of First Nations to access the lands and resources to carry out their traditional activities within the PDA and immediately adjacent

areas of the LAA during the Construction and Operation phases, but their access may be somewhat restored during Decommissioning, Reclamation and Closure.

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).	• 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.
	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).	• 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.

8.13.1.3 Temporal Boundaries

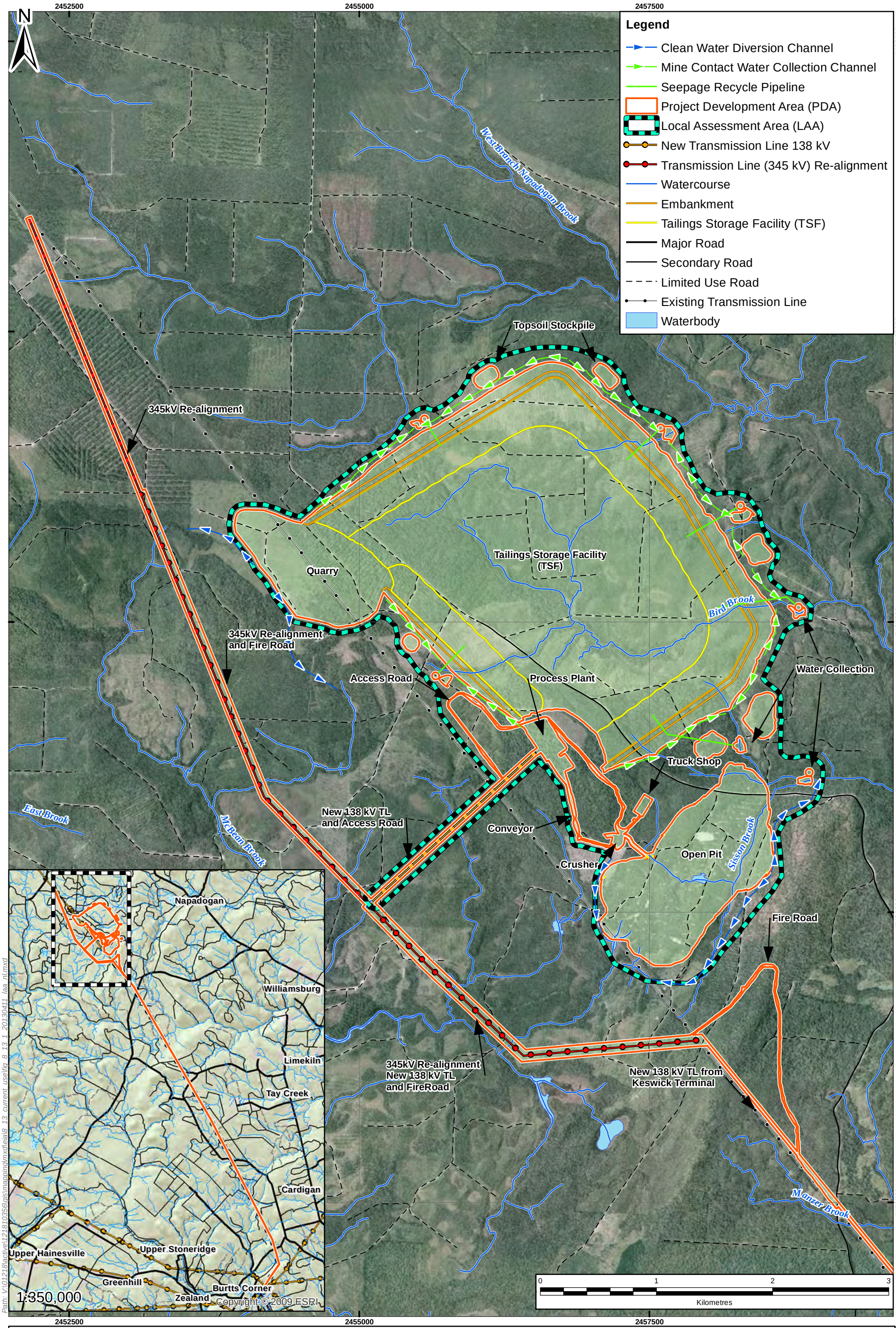
The temporal boundaries for the assessment of the potential environmental effects of the Project on Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons include the three phases of Construction, Operation, and Decommissioning, Reclamation and Closure (including Post-Closure) 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 the Draft EIA Report), during which period First Nations engagement was conducted by Northcliff/SML 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. Additional engagement with First Nations carried out since the Draft EIA Report was released in July 2013 has further informed the assessment of Current Use, as reflected in this Final EIA Report.

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.



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NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC PROJECT AND SHOULD NOT BE USED FOR OTHER PURPOSES.

Project Development Area (PDA), and Local Assessment Area (LAA) for Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons

Sisson Project:
Environmental Impact Assessment (EIA) Report, Napadogan, N.B.

Client: Sisson Mines Ltd.

Scale:	Project No.:	Data Sources:	Fig. No.:
1:30,000	121810356	NBDNR	8.13.1

Date: (dd/mm/yyyy)	Dwn. By:	Appd. By:
23/11/2014	JAB	DLM

Map: NAD83 CSRS NB Double Stereographic

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.

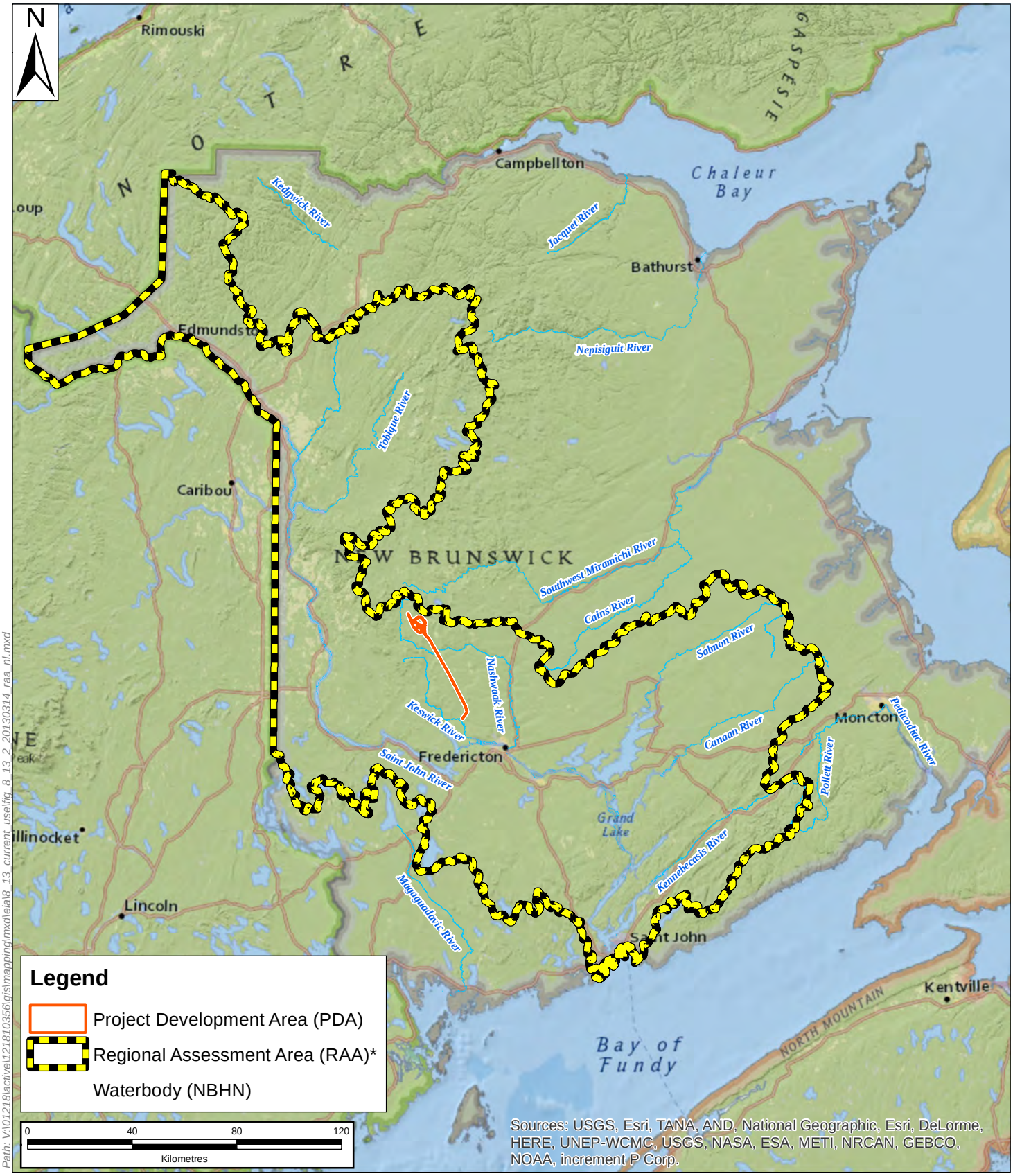
Technical boundaries relating to the assessment of Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons include the lack of a defined, documented body of knowledge concerning what lands or resources are currently being used by Aboriginal persons and communities for traditional purposes within the PDA, LAA, or the larger RAA. The IKS was specifically developed to provide information on the body of indigenous knowledge of the use of the PDA and broader region by Aboriginal persons. While traditional and local knowledge does exist, prior to the publication of the IKS, there was no specific documentation or literature available on the types and extent of use of the PDA, LAA, or broader area available for use by the Study Team, representing a technical limitation. The IKS did provide further specific information about such use in the broader Crown land block, but little PDA-specific information was provided. Apart from a single "harvester statement", First Nations did not provide any instances and relative locations of traditional use of the PDA during any engagement activities carried out with First Nations.

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. Communication by "word of mouth" refers to the fact that Current Use information was provided by First Nations in the course of discussions with Aboriginal persons and through engagement activities, and the information collected by the IKS study author was reportedly collected through interviews and discussions with knowledge holders. 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. As well, since the information that forms this body of knowledge relating to Current Use was collected through engagement and interviews, during the IKS and otherwise by SML, there is no means of verifying it or to ensure that it is a comprehensive record of all information available on the subject.

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.



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NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC PROJECT AND SHOULD NOT BE USED FOR OTHER PURPOSES.

Regional Assessment Area (RAA) for Current Use of Land and Resources for Traditional Purposes by Aboriginal Persons Sisson Project: Environmental Impact Assessment (EIA) Report, Napadogan, N.B. Client: Sisson Mines Ltd.	Scale: 1:2,000,000	Project No.: 121810356	Data Sources: ESRI ArcGIS Online, NHN, NBADW * Adapted from Goddard (1996)	Fig. No.: 8.13.2	Stantec
	Date: (dd/mm/yyyy) 23/11/2014	Dwn. By: JAB	Appd. By: DLM		

Map: NAD83 CSRS NB Double Stereographic

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).

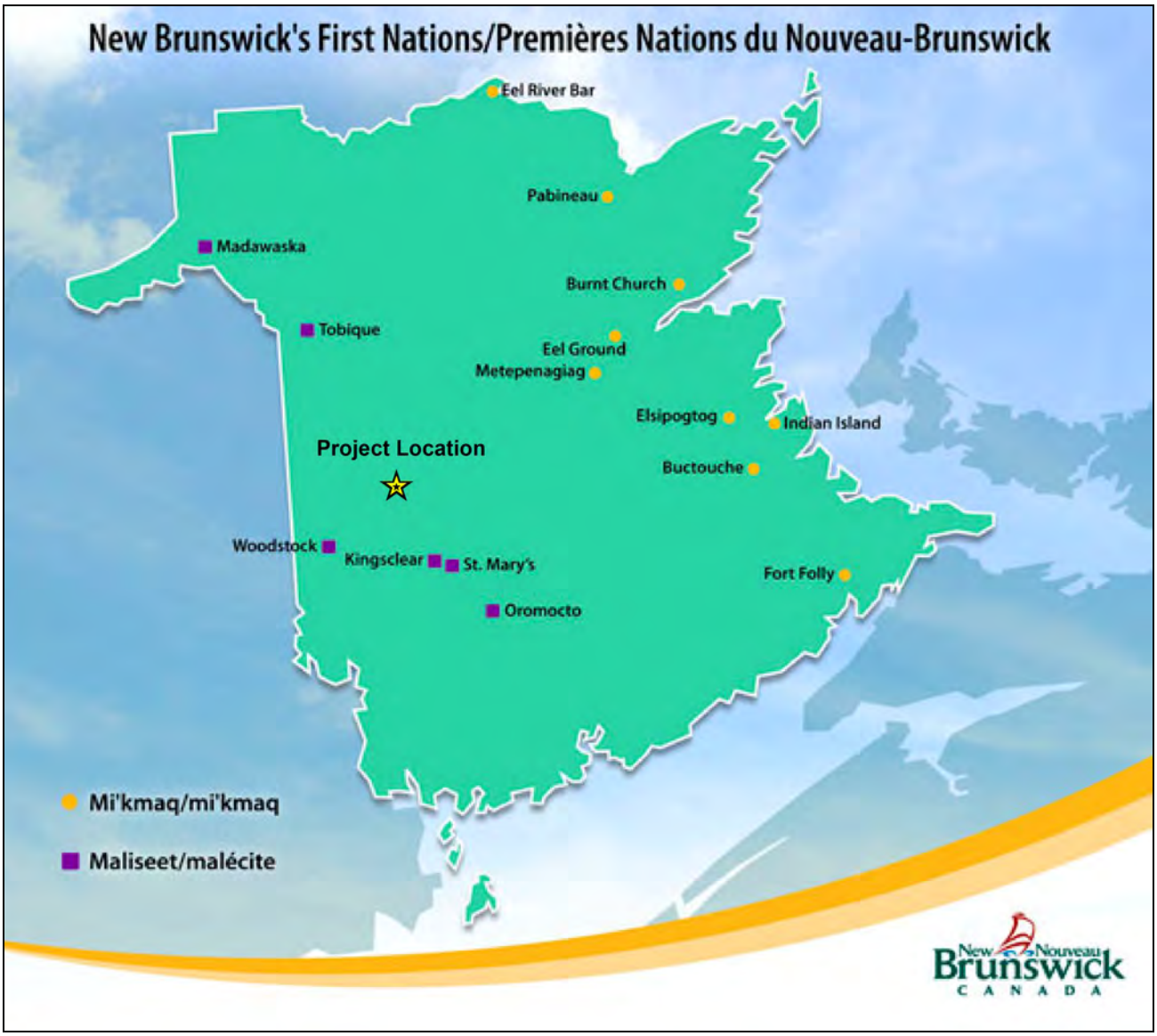
8.13.2.1 First Nation Communities and Population in New Brunswick

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).

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.

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.



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

Figure 8.13.3 Location of New Brunswick First Nations Communities

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

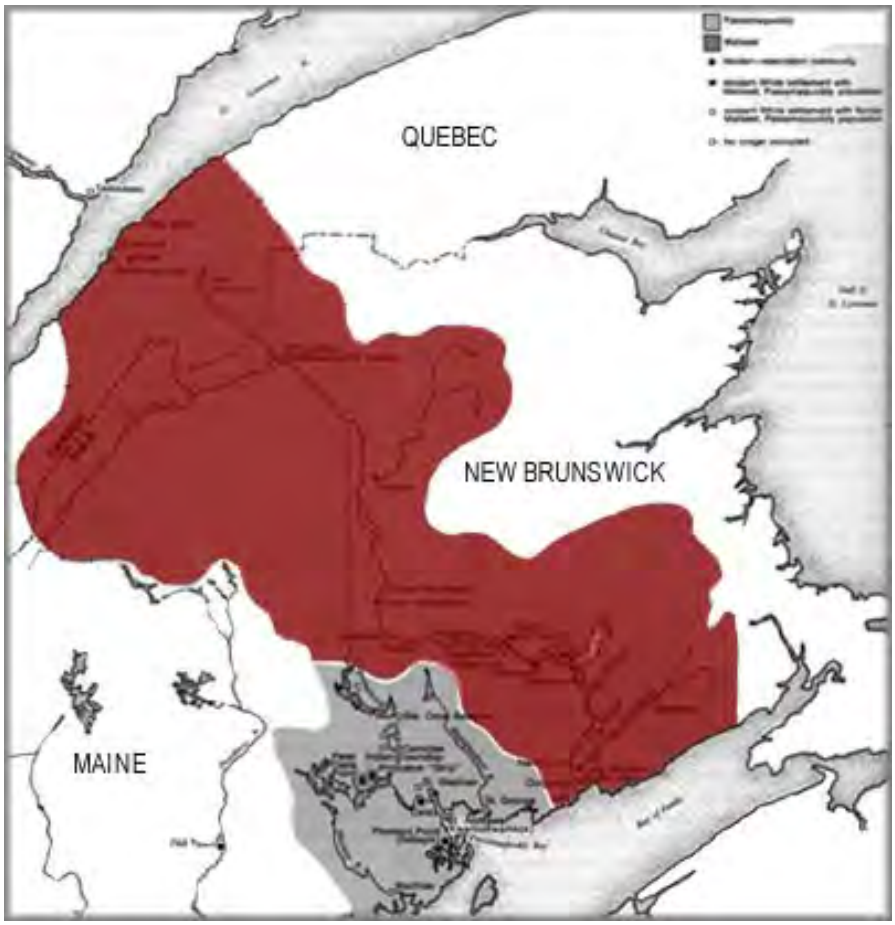
First Nation Community	2006 Population (On-Reserve)
Maliseet First Nations in New Brunswick	
Oromocto First Nation	636
St. Mary's First Nation	1,729
Kingsclear First Nation	961
Woodstock First Nation	941
Tobique First Nation	875
Madawaska Maliseet First Nation	165
Sub-total	**5,307**
Mi'kmaq First Nations in New Brunswick	
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
Sub-total	**7,879**
Total On-Reserve First Nation Population in New Brunswick (2006)	**13,186**

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, west through the state of Maine where it meets the Passamaquoddy territory, south to the Bay of Fundy, and east 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/SML 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 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.

Past Use

The St. John River (Wolastoq) and all of its tributaries generally delineate the boundaries of the territory Wolastoqiyik (Maliseet) people. Wolastoqiyik means “people of the beautiful river” specifically referring to the St. John River (Moccasin Flower Consulting 2013). While mainly located in what is now New Brunswick, the St. John River and its tributaries also extend into northeastern Maine and southern Québec (Erickson 1996).

Much of this area would have been a very productive Acadian forest that included 32 species of trees prior to forestry activity (Moccasin Flower Consulting 2013). As noted in the IKS, the wide variety of tree species, each with their individual attributes, was very important to Maliseet people and their culture and identity. A wide variety of items related to transportation were made from trees including canoes, snowshoes and toboggans that were crucial to mobility for gathering resources as well as supporting access to trade networks that were vital to the success of their livelihood. Black Ash, for example, was important for making baskets used for food storage and transportation and birch bark containers were used for food preparation. As living off the land became more challenging in the last century these same items that were sold to non-Aboriginal people to support livelihood practices such as plant harvesting and fishing (Moccasin Flower Consulting 2013). Participants in the IKS recalled their grandfathers, fathers and uncles making baskets out of black ash, and barrel hoops and axe handles out of white ash. One participant noted how the Maliseet sold black ash baskets and moccasins to “rich Americans” and traded black ash baskets for eggs, meat and produce from local farmers (Moccasin Flower Consulting 2013).

The location of the Project site between St. Mary’s and the Tobique First Nation may have been an important location to First Nations in the past (Moccasin Flower Consulting 2013). Napadogan would likely have been used as hunting ground and is thought to have derived from the Maliseet word, “to kill something” (Moccasin Flower Consulting 2013). A participant in the IKS whose grandfather hunted in Napadogan when game in areas near the communities nearby was scarce described Napadogan as traditional moose hunting area. In addition, there are two noted portage routes in the general area of the Project, one to the east and one west of the PDA, both located several kilometres from the proposed PDA for the mine site. These routes would have facilitated access, and hence trade and communication, between the southwest Miramichi River and the Nashwaak River systems (Moccasin Flower Consulting 2013).

Prior to European contact, all resources within their traditional territory was available to the Maliseet and the annual living cycle was based on when and where these resources were most abundant and available (Moccasin Flower Consulting 2013). At the time of European contact in New Brunswick, the Maliseet settlement patterns were "seasonal with large summer villages and dispersed winter settlements" (Moccasin Flower Consulting 2013). Disease dramatically decreased the First Nation populations in eastern North America during the period from the 15th to the 18th Centuries. As stated in the IKS, the large influx of Loyalist settlers during the post-American Revolution period displaced many of the Maliseet people from their traditional lands and settlements resulting in many changes to the Maliseet economy due to the diminished access to land and resources. Many of the Maliseet became engaged in the fur trade and worked as agricultural labourers, log-boom drivers, and guides for hunters and fisherman during this time.

Commercial lumbering started along the St John River by 1850 and numerous sawmills were in operation in most valleys of the major tributaries to the River. Large amounts of land were cleared for agriculture and between 1850 and 1890, and the City of Saint John became more industrialized along with agriculture in the St John River basin (Moccasin Flower Consulting 2013). In addition, government restrictions placed on the Maliseet further decreased access to traditional land and resources for their livelihood. Despite the "diversification of their economy" and restrictions on hunting and fishing, the Maliseet continued to carry-out their traditional activities (Moccasin Flower Consulting 2013).

Current Use Near the Project Site

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)." Multiple participants noted the number of plants and edible berries in the PDA. "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)". Golden thread was considered by one participant as being "one of the most precious medicines for the Maliseet people." 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).

Traditional activities continue to be carried out within the general area of the Project as well as within the PDA. 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, wood cutting and gathering areas as well as areas identified as multi-use within or in proximity to the PDA, as well as within the large contiguous block of Crown land within which the PDA is located.

Several species were identified as being hunted by the Maliseet within the general area of the Project, including moose, deer, partridge, woodcock, and rabbits. Despite impacts from forestry, the IKS notes that the area is still rich for moose hunting and contains "clean drinking water". Some participants noted that although there is less moose in the area than there used to be, it is still a prime hunting area due to the large size of the moose and because there are few hunters (Moccasin Flower Consulting

2013). One participant had killed his first moose and currently hunts with his father and son in proximity to the PDA. Another participant parks his trailer within and adjacent to the PDA to hunt with his son.

In addition to hunting, there are brooks and lakes in the general area of the Project that 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. (As noted in Section 8.5, the fish found in the watercourses that will be affected by the Project are small and of generally low abundance; as well, fishing for Atlantic salmon is not permitted in the entire Nashwaak River watershed.)

A member of the St. Mary's First Nation (identified herein generically as "the harvester") was identified as having a Crown lease camp approximately 1.3 km from the edge of the PDA, to the east. 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. Community 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. Wood cutting is reported within the PDA and more generally on Crown land areas to the south and southeast of the PDA. 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 2011), though it provides little information specific to the Project area.

It is recognized that the traditional use of land and resources is vitally important to Aboriginal culture, and the IKS identified some locations within the LAA that are used for such activities as hunting, fishing and tree cutting. However, the IKS did not identify any sites of particular cultural or spiritual importance within and around the LAA, and no such sites have otherwise been identified to SML. At the request of the CEA Agency, SML convened a September 4, 2014 meeting with First Nations and the federal Crown to consult specifically about potential effects of the Project on Aboriginal cultural heritage. At that meeting or subsequently, First Nations provided no new information about potential Project-related environmental effects on their cultural heritage, or about their mitigation. Also, no new information was provided on particular sites of cultural importance within the Project site.

Conclusions of the IKS

The IKS emphasizes that cultural experiences such as participating in traditional activities reinforce the Maliseet relationship with their traditional territory and demonstrate the link between land and culture.

The IKS (Moccasin Flower Consulting 2013) notes that the Maliseet within the St. John River basin have experienced considerable loss in their livelihood through land and resources being "taken up" by European settlers through forestry, fishing and agricultural industries since the beginning of European contact in New Brunswick. This has resulted in a subsequent decline in the quality, quantity and diversity of resources used by the Maliseet. In addition, the resultant restrictions placed on the Maliseet by the government for generations, which include restrictions on fishing, hunting and wood cutting have also altered their use of land and impacted their livelihood. As a result of colonial settlement patterns by non-Aboriginal people living in New Brunswick since European contact, the Maliseet began to be displaced from their traditional territory. This has caused the available land for Aboriginal persons to practice their traditional activities to be progressively reduced over time, thereby making it increasingly difficult for them to access Crown land to practice their traditional activities. Aboriginal persons have therefore moved further and further into what might be considered remote locations (such as the small tributaries of the St. John River found in and around the Project site) to find the quality, quantity and diversity of resources required to continue practicing their traditional activities (*i.e.,* hunting, trapping, fishing and gathering) (Moccasin Flower Consulting 2013).

The IKS notes the importance of the general area of the Project as it is a large piece of intact and contiguous Crown land in proximity to St. Mary's and Woodstock First Nations in which traditional Maliseet livelihood activities can be pursued. The Project Site is equidistant from St. Mary's and Woodstock First Nations and has multiple roads to facilitate access to these areas for traditional activities. According to the IKS, the general area near the Project is considered an important land use area due to the high level of quality, quantity, and diversity of resources. Additionally, the number of forestry roads within and in proximity to the PDA makes it accessible to both Elders and children. According to the IKS, even though the general area of the Project has been subjected to extensive forestry operations, this area experiences limited use from non-Aboriginal land users, which limits competition for traditional resources in the area.

Importantly, the IKS emphasizes that traditional activities go beyond simply hunting, fishing and gathering resources, and include the inter-generational transfer of traditional knowledge that accompanies these activities. For example, a community member of St. Mary's First Nation wrote a "harvester statement" that was read during a First Nations EA Working Group meeting which stated that he uses the area for "knowledge transfer" to young people from his community. The harvester statement, and various statements made by First Nations people during engagement activities carried out for the Project, reinforces the importance of the land and resources to First Nations' cultural and spiritual values, and to their ability to practice their traditional activities.

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
Construction	
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 Offsetting/Compensation Plan	1
Emissions and Wastes	0
Transportation	0
Employment and Expenditure	0
Operation	
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
Decommissioning, Reclamation and Closure	
Decommissioning	0
Reclamation	1
Closure	1
Post-Closure	1
Emissions and Wastes	0
Transportation	0
Employment and Expenditure	0

Project-Related Environmental Effects
Notes:
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 during Construction and Operation for security and safety purposes, and thus the land or resources in the LAA will no longer be accessible for any current use activities—following Closure, access to certain parts of the LAA will be restored. 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 Offsetting/Compensation Plan;
- **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 Offsetting/Compensation Plan, as proposed by SML, will involve limited disturbance of land on either side of the Nashwaak Lake culvert to make way for the removal of the culvert and its replacement by a woods road bridge, 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 implementation of the offsetting work, the shore area will be assessed for any archaeological potential, including potential existence of burials, or settlements. Since the removal of this culvert is intended to improve fish passage into Nashwaak Lake

and its tributaries, 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 Offsetting/Compensation Plan 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 are expected to 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	Construction • Site Preparation of Open Pit, TSF, and Buildings and Ancillary Facilities. • Physical Construction of Realigned Fire Road, New Site Access Road, and Internal Site Roads.	• 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. • Forestry management plans will be revised by Crown licensees to incorporate the harvesting of forestry resources in the PDA as part of Site Preparation. SML will provide information to Crown licensees (including Aboriginal licensees) well in advance of Construction to facilitate planning in collaboration with NBDNR. • SML will work with First Nations and appropriate government agencies to facilitate the harvesting of resources used for traditional purposes in the LAA 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 post closure of the Project.	A	L	S	LT/ C	R/I	U	N	H	--	Y	None recommended. However, though the EIA confidently predicted no significant environmental effects to traditional foods, SML will monitor potential environmental effects at 2 to 3 traditional use sites identified by First Nations for harvesting of country foods (*e.g.*, fiddleheads, berries, medicinal plants). This will be carried out prior to Construction, and again within 5 years of the start of Operation.

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					
		• SML will work to optimize training, employment, and business opportunities of the Project for Aboriginal people.											
	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										Recommended Follow-up or Monitoring
			Direction	Magnitude	Geographic Extent	Duration and Frequency	Reversibility	Ecological/ Socioeconomic Context	Significance	Prediction Confidence	Likelihood	Cumulative Environmental Effects?	

KEY

Direction
- P Positive.
- A Adverse.

Magnitude
- 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.

Geographic Extent
- S Site-specific: Within the PDA.
- L Local: Within the LAA.
- R Regional: Within the RAA.

Duration
- 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.

Frequency
- O Occurs once.
- S Occurs sporadically at irregular intervals.
- R Occurs on a regular basis and at regular intervals.
- C Continuous.

Reversibility
- R Reversible.
- I Irreversible.

Ecological/Socioeconomic Context
- 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.

Significance
- S Significant.
- N Not Significant.

Prediction Confidence

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.

Likelihood

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.

Cumulative Environmental Effects?
- 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.

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 Timber licensees to incorporate the harvesting of forestry resources in the PDA as part of Site Preparation. SML will provide information to Crown Timber licensees (including Aboriginal permittees) well in advance of Construction to facilitate planning in collaboration with NBDNR.
- SML will work with First Nations and appropriate government agencies to provide the opportunity to harvest resources used for traditional purposes in the LAA prior to site preparation activities (where reasonable within the timeframe of planned activities).
- The relocation of the Fire Road will ensure that free access in and around the PDA will be facilitated for Current Use.
- Wetland compensation and fish habitat offsetting will mitigate environmental effects on those biophysical resources.
- Reclamation of the PDA will consider traditional resources to ensure the land is accessible for traditional purposes following closure of the Project.

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

First Nations engagement activities undertaken by Northcliff/SML to date have facilitated the development of considerable understanding of First Nations concerns about the Project, and substantial responses from Northcliff/SML to address and mitigate those concerns. A comprehensive synopsis of those concerns and responses is provided in Table 8.13.5.

Despite all the mitigation measures that SML is able to implement, First Nations will be excluded from accessing land, and using resources, within the Project exclusion zone for the life of the Project. This is unavoidable. As stated above, SML respects the importance of this traditional use to the Aboriginal community, and the opportunities it provides for the transfer of traditional knowledge. SML notes that its commitments to addressing First Nations concerns as described in Table 8.13.5 are intended to mitigate this loss, including commitments to optimize Aboriginal training, employment and business in relation to the Project, and to compensate for affected wetlands and fisheries.

While the EIA Report (Section 8.6 above) predicts no significant environmental effects on wildlife populations in the large contiguous block of Crown land that encompasses the PDA (referred to herein as the "Crown Land Block" or CLB), and thus on First Nations use of those wildlife resources, SML recognizes that First Nations remain concerned that their traditional use of land and resources in the CLB may be becoming unsustainable. Further research (Appendix F) demonstrates that the resources that are thought to be present in the PDA and LAA are also widely available in the remainder of the CLB. Nonetheless, at a September 4, 2014 meeting with First Nations and the federal Crown, SML stated that it is supportive of a long-term study of the sustainability of traditional land and resource uses in the CLB in partnership with other stakeholders (*e.g.,* Province of New Brunswick, forestry companies).

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, SML 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.

Table 8.13.5 Summary of Concerns Raised by Aboriginal Groups (Revised November 10, 2014[1])

Theme	Source	Concern / Comment	Sisson Mines Ltd.[2] Response
Access to and use of Crown land and resources for traditional activities such as hunting, fishing, trapping, gathering, and harvesting timber	New Brunswick First Nations at various consultation meetings throughout the engagement process; Woodstock First Nation (WFN), St. Mary's First Nation (SMFN), and Madawaska Maliseet First Nation (MMFN) in the Indigenous Knowledge Study (IKS 2013); MSES report on behalf of all New Brunswick First Nations.	1. Concern that Crown land and resources used for traditional purposes by Aboriginal people will be adversely affected by the Project.	To minimize the Project footprint on Crown land, and the consequent environmental effects of the Project on the current use of land and resources for traditional purposes by Aboriginal persons ("Aboriginal use"), Northcliff/SML included a wide range of mitigation in the Project including: • Designed a compact mine site that locates facilities as close as possible to each other to minimize the footprint of the Project infrastructure. • After thorough consideration of several alternatives, located and constrained the site of the tailings storage facility (TSF), and eliminated surface waste rock storage, thereby avoiding any lakes and otherwise minimizing Project-related environmental effects on the aquatic environment including fish, and avoiding substantial areas of elevated archaeological potential. • Located Project facilities almost entirely in one watershed (Napadogan Brook) for enhanced control and containment of mine water and waste, thus minimizing the number of potential environmental effects pathways and the overall environmental liability upon Project closure and minimizing the potential for environmental effects on the terrestrial, wetland and aquatic environments, and their Aboriginal use. • Located the transmission line beside an existing line to minimize potential environmental effects due to loss and fragmentation of wildlife habitat. • Diversion of surface runoff around Project facilities, and recycling of process water from the TSF, to minimize Project water requirements from the Napadogan Brook watershed. • Substantial TSF seepage management, control, monitoring and adaptive management options to ensure that downstream wetland and aquatic environments are protected from significant adverse environmental effects, along with Aboriginal use of those resources. Productive fish habitat that is directly or indirectly affected by the Project will be offset with a habitat enhancement project that enhances commercial, recreational and/or Aboriginal fisheries outside the Project site. The offset plan must be approved by DFO, following First Nations consultation, before an authorization under the *Fisheries Act* can be issued. Discussions of the offset plan are continuing between SML, First Nations, and DFO representatives, including on November 19, 2013 and October 9, 2014; SML welcomes the

1 This table was originally included in the SML response to IR CEA-03-01 on May 20, 2014. This revision includes new or revised "Response" text based on the results of meetings with First Nations and other developments since May 2014.

2 After submission of the Sisson Project EIA Report to governments in July 2013, Northcliff Resources Ltd. and Todd Minerals Ltd. entered into a limited partnership agreement to advance the development of the Sisson Project. As a result of this agreement, the Sisson Project is now being developed and advanced by Sisson Mines Ltd. (SML), on behalf, and as general partner, of the Sisson Project Limited Partnership. Thus, the Proponent of the Sisson Project is now Sisson Mines Ltd., and all references to Northcliff Resources Ltd. (Northcliff) in this document can be read as referring to Sisson Mines Ltd.

Table 8.13.5 Summary of Concerns Raised by Aboriginal Groups (Revised November 10, 2014[1])

Theme	Source	Concern / Comment	Sisson Mines Ltd.[2] Response
			opportunity to consider the offset plan with First Nations through additional meeting(s). The proposed offset project will enhance fisheries productivity through the removal of a barrier to fish passage on the Nashwaak River below its outlet from Nashwaak Lake. The enhanced fisheries resources will be available for Aboriginal use, and clearly mitigate Project-related environmental effects on Aboriginal fisheries. SML is willing to consider funding small-scale opportunities to enhance fish habitat as part of its community or First Nations relations programs; these would not be part of the offsetting/compensation or authorization requirement under the *Fisheries Act* for the loss of fish habitat and associated fish productivity associated with the Project. SML recognizes the importance of salmon to First Nations culture. Importantly, Section 8.5.4.3 of the EIA Report demonstrated that Project-related environmental effects on Atlantic salmon are not expected, as discussed below in response to Concern/ Comment # 5 and #6. As required pursuant to the New Brunswick *Watercourse and Wetland Alteration Regulation – Clean Water Act,* SML will develop and implement a wetland compensation plan to replace wetland habitat affected by the Project. SML is willing to work with First Nations to consider their interests and knowledge in preparing and implementing the plan in ways that could support Aboriginal use activities. Site water management has been designed to avoid or minimize adverse environmental effects on water quality downstream of the Project. Key features include treatment of surplus water before discharge, robust TSF seepage control and management, and groundwater monitoring and, if needed, interception (pump-back) wells around the TSF perimeter. The human health and ecological risk assessment (HHERA) conducted for the EIA (Sections 7.7 and 8.9 of the EIA Report) carefully considered Aboriginal use, and found that significant adverse environmental effects on human and aquatic health are unlikely. As detailed in Sections 8.6.and 8.7 of the EIA Report, there are no wildlife or vegetation species at risk (SAR) or species of conservation concern (SOCC) within the Project Development Area (PDA), and other wildlife or vegetation species located within the PDA are part of secure populations within the larger contiguous Crown Land Block (CLB) around the PDA and, indeed, in New Brunswick. No critical habitat for SAR as defined in the *Species at Risk Act (SARA)* will be affected by the Project. While the wildlife and vegetation resources of the PDA will not be available for Aboriginal use for a period of time, the availability of the secure, SAR and SOCC species in the CLB and in New Brunswick are such that there will be no significant environmental effects on Aboriginal use of these species.

Table 8.13.5 Summary of Concerns Raised by Aboriginal Groups (Revised November 10, 2014[1])

Theme	Source	Concern / Comment	Sisson Mines Ltd.[2] Response
			Sisson Mines Ltd. (SML) nonetheless recognizes that First Nations remain concerned about the sustainability of their traditional uses of wildlife and other resources in the Crown land block (CLB) within which the Project is located. At a September 4, 2014 meeting with First Nations and the federal Crown, SML stated that it is supportive of a broader study of the sustainability of traditional First Nations wildlife resource use in the CLB. At that meeting, First Nations undertook to develop a draft study proposal for discussion with SML. Since SML is only one of several parties with an interest in this issue, the study would need to involve others (*e.g.*, Province of New Brunswick, forestry companies). Dust and other Project emissions will be monitored and closely managed during construction and operation of the Project to ensure that their environmental effects on land and resources outside the Project footprint are avoided or minimized and not significant, as concluded in Section 8.2 of the EIA Report. The HHERA used very conservative estimates of the amounts of country foods (*e.g.*, fish, wildlife, berries) that First Nation individuals consume and found that a long-term change in health is not expected due to the Project. As a general commitment, SML will continue to work with interested First Nations throughout the life of the Project to identify and implement reasonable measures to monitor and avoid or mitigate Project-related environmental effects on the contemporary exercise of asserted or established Aboriginal or treaty rights.
		2. Concern about the environmental effect of the loss of access to Crown land within the Project footprint on current Aboriginal use of land and resources for traditional purposes.	The approximately 1,440 hectares of Crown land to be taken up by the Project is about 1.9% of the surrounding CLB. The EIA did not identify any natural resources within the Project footprint that are unique to the CLB, and found that the nature and availability of the resources within the Project footprint are indistinguishable from those within the CLB. Supplemental research by Stantec (Annex 11) confirms this EIA conclusion. As well, the IKS (Moccasin Flower Consulting 2013, Figure 9) reported extensive use of Crown and other lands within an area up to some 30 km from the Project site for such activities as fishing, hunting, gathering, timber harvesting, and undefined “multiuse”. SML acknowledges that some First Nations individuals or families accustomed to undertaking traditional activities on the Project site will not be able to do so during the life of the Project and for some time into Post-Closure. At the same time, SML’s view is that, overall, the opportunity for First Nations to undertake traditional use activities on Crown land have been mitigated extensively as described throughout this table, and will not be significantly affected by the loss of access to land and resources on the Project site for several decades. Whether or not the Project proceeds, the land encompassed by the PDA is subject to forest management by the Crown timber license holder, who is authorized by the New Brunswick Department of Natural Resources (NBDNR) to cut the timber contained within it in accordance with its forest management plan. First Nations are allocated 5% of the

Table 8.13.5 Summary of Concerns Raised by Aboriginal Groups (Revised November 10, 2014[1])

Theme	Source	Concern / Comment	Sisson Mines Ltd.[2] Response
			provincial annual allowable cut as agreed between First Nations and the Government of New Brunswick, and this allocation will be unaffected whether or not the Project proceeds. Further, this forest management incorporates environmental protection measures that assure the continued availability of resources and the sustainability of healthy ecosystems and populations of flora and fauna. These measures are collectively protective of land and resources for Aboriginal use, particularly as they are aimed at maintaining biodiversity and populations at current levels. Nonetheless, as documented in Section 8.13 of the EIA Report, SML acknowledges that First Nations will not have access to the approximately 1,440 hectares of Crown land to be taken up by the Project during its operational life and for some time into Post-Closure. This is an environmental effect of the Project that cannot be avoided by SML. Access to most of this area will be restored during Closure of the Project. SML acknowledges First Nations concerns about this loss of access to the Project site, and is supportive of a study of the sustainability of traditional First Nations wildlife and perhaps other resource uses in the Crown land block within which the Project is located (see Concern/Comment #1 above). In addition to mitigating adverse environmental effects on Aboriginal use of Crown land and resources (Concern/Comment #1 above), SML is committed to working with interested First Nations communities and organizations to facilitate their securing training, employment and business opportunities with the Project that are consistent with their interests and capabilities. As well, opportunities will be pursued to build First Nations capacity and knowledge in areas of mitigation of Project-related environmental effects on natural resources that are of importance to First Nations, such as participation in archaeological programs and perhaps monitoring of flora and fauna in follow-up programs. SML will work with interested First Nations at any time to define how this commitment will be put into practice. As an example, discussions with Woodstock First Nation on a cooperation agreement that encompasses these and other opportunities began in 2013 and continue. Northcliff/SML has offered such discussions and opportunities to the other First Nations (SMFN and the Assembly of First Nations Chiefs of New Brunswick representing the 13 other New Brunswick First Nations); none has yet taken up the offer. Northcliff/SML has demonstrated this commitment by, for example, hiring First Nations field technicians for the archaeology program (see Concern/Comment #10 below), and providing university scholarships to four First Nations students in 2011 and 2012. SML will maintain access to Crown land and resources in the Project area by re-routing Fire Road, which runs through the Project site, for about 10 km around the site. This action will mitigate the adverse environmental effect of loss of access to land and resources for Aboriginal use by facilitating access to Crown land around the Project site.

Table 8.13.5 Summary of Concerns Raised by Aboriginal Groups (Revised November 10, 2014[1])

Theme	Source	Concern / Comment	Sisson Mines Ltd.[2] Response
			Regardless of whether a First Nation takes up the offer to discuss a cooperation agreement, SML will continue to engage with interested First Nations, throughout the Project life, to exchange information about the Project and to respond, as appropriate, to issues raised (for example, through the Community Liaison Committee to be established – see Concern/Comment #18 below). SML's local hire policy will also provide the opportunity for interested and qualified First Nation individuals to be considered for employment on the Project, regardless of whether their nation has a cooperation agreement with SML. SML will also continue to work with organizations such as the Joint Economic Development Initiative (JEDI) and the Aboriginal Workforce Development Initiative (AWDI) focused on providing training and education opportunities to First Nations.
		3. Concern about potential Project effects on plant species of significance to First Nations (*e.g.*, calamus root).	Calamus root is widespread in New Brunswick but was not identified in the PDA despite extensive walkover of the site throughout the growing season of 2011 and part of 2012. Riparian and marsh habitat types where calamus root is typically found were identified prior to surveys as areas of elevated potential for rare plant species, and field surveys targeted these areas with increased effort. Goldthread, which was also singled out as being of particular importance, is ubiquitous in a variety of wooded habitats across the entire province including the contiguous block of Crown land around the Project, and was encountered throughout the Project site and beyond. None of the species found on the Project site and identified in the IKS as having medicinal or food value are of conservation concern, nor are they found on the Project site in an unusual abundance that is atypical to other areas of New Brunswick. Further information on these species is provided in Annex 11. Though the EIA confidently predicted no significant environmental effects to traditional foods, SML will undertake monitoring of potential effects at 2 to 3 traditional use sites identified by First Nations for harvesting of country foods (*e.g.*, fiddleheads, berries, medicinal plants) prior to Construction, and again within 5 years of the start of Operation.
		4. Request for First Nations to be provided an opportunity to harvest of plants of importance prior to construction.	SML made a commitment in the EIA Report that First Nations will be provided with a reasonable opportunity to collect plants of importance within the Project footprint prior to construction. SML will cooperate with First Nations to facilitate such harvesting.

Table 8.13.5 Summary of Concerns Raised by Aboriginal Groups (Revised November 10, 2014[1])

Theme	Source	Concern / Comment	Sisson Mines Ltd.[2] Response
Availability of fish, wildlife and plant resources around the Project site	New Brunswick First nations at various consultation meetings throughout the engagement process; WFN, SMFN, and MMFN through the IKS; MSES report on behalf of all New Brunswick First Nations.	5. Concern about the potential effects of the Project on stream flows and water quality, and consequent adverse effects to fish and fish habitat, around the Project site.	SML acknowledges the concerns of First Nations with these potential environmental effects outside the Project site. To avoid or minimize these potential environmental effects, SML has employed a range of mitigation strategies to ensure that there is no significant environmental effect on these resources or on their Aboriginal use: • All mine contact water will be collected and treated prior to release to minimize the environmental effects on water quality in downstream waters, and thereby render the environmental effects not significant. Seepage through the TSF embankments will be controlled and monitored; groundwater pump-back wells will return water to the TSF that may jeopardize downstream water quality. It is expected that the Province of New Brunswick will establish appropriate site-specific permitting requirements on the release of treated water, as well as receiving water quality objectives, to protect human and ecological health downstream, including resources of importance for Aboriginal use. • To both minimize the Project footprint and ensure the protection of water quality and related resources, including those of importance for Aboriginal use, Northcliff/SML decided to place all waste rock in the TSF such that it will be submerged before the potential onset of acid generation, or to keep it in the Open Pit for flooding at Closure. This is consistent with good international practice in the mining industry. • Water diversion channels will be used to minimize the generation of mine contact water by diverting non-contact run-off away from the Project site into adjacent drainages. • Process water for use in the plant will be recycled as much as possible in order to reduce the need to use fresh water sources. As detailed in Section 8.5, no significant environmental effects to any fish species were predicted by the EIA, and follow-up programs have been developed to verify this prediction. During the Construction, Operation, Closure and Post-Closure phases of the Project, and as is expected to be required by regulatory permits, SML will implement comprehensive environmental effects monitoring to ensure that human and ecological health is not being jeopardized, and to provide information for the implementation of adaptive management measures should unexpected environmental effects materialize. This monitoring will comprise a part of the overall follow-up and monitoring program, and SML is committed to involving First Nations in the review of the results of these programs aimed at ensuring the effectiveness of mitigation, the verification of environmental effects predictions, and demonstrating compliance with applicable laws and regulations (*e.g.*, MMER). The proposed follow-up and monitoring program is presented in Section 9.4 of the EIA Report, and is embedded in SML's Environmental and Social Management System (ESMS, Appendix D). SML proposes a Community Liaison Committee to support this work (see Concern/Comment #18 below).

Table 8.13.5 Summary of Concerns Raised by Aboriginal Groups (Revised November 10, 2014[1])

Theme	Source	Concern / Comment	Sisson Mines Ltd.[2] Response
		6. Concerns about potential Project impacts on salmon (juvenile habitats and production, adult returns) in the Nashwaak River watershed.	SML understands that Atlantic salmon are culturally important for Maliseet people and an important resource for traditional purposes. For conservation reasons, the entire Nashwaak River watershed is closed to Atlantic salmon fishing and harvesting. Regardless, Atlantic salmon are known to spawn and rear in Napadogan Brook, but have not been observed in the brooks that drain the Project site (with the exception of a single parr near the confluence of Bird Brook). As assessed in detail in Section 8.5 of the EIA Report, the EIA determined that Project-related changes to water quality, temperature and flows are unlikely to affect the productivity of Napadogan Brook for salmon. Habitat loss due to flow reductions in West Branch Napadogan Brook has been included in determining the scope of the habitat offset plan (see Concern/Comment #1 above). That mitigation will also be effective in relation to Aboriginal use of aquatic resources.
		7. Concern that Project employees may hunt moose or other game in the general Project area, leading to greater competition for resources.	To mitigate the potential environmental effects of the Project on wildlife, and on Aboriginal use of wildlife, SML will implement a strict "no hunting" policy for all employees and contractors while they are working at the Project site. It should be noted that any member of the public is authorized under the *Fish and Wildlife Act* to hunt for moose or other game species in accordance with the requirements of their hunting licenses and by observing applicable hunting regulations and requirements.
		8. Concern that increased traffic on forest roads to the Project site may increase wildlife mortalities due to vehicle collisions.	There are no indications that the current volume of vehicle traffic on the forest resource roads leading to the Project site is creating unacceptable levels of vehicle-wildlife collisions or wildlife mortalities. As concluded by the EIA Report (Section 8.15), the Project increases in vehicle traffic are relatively small, will not exceed the capacity of those roads, will not result in unacceptable deterioration of that infrastructure, and are not expected to result in an increase in vehicle-wildlife collision rates. SML will develop and enforce a traffic management plan that includes vehicle speed limits and yielding to wildlife for Project-related personnel to observe while accessing the Project site as mitigation for Project-related environmental effects on wildlife, including those that are important for Aboriginal use.

Table 8.13.5 Summary of Concerns Raised by Aboriginal Groups (Revised November 10, 2014[1])

Theme	Source	Concern / Comment	Sisson Mines Ltd.[2] Response

Heritage and Cultural Resources	New Brunswick First Nations at various consultation activities such as the First Nations EA Working Group (FNEAWG) meetings, and other correspondence throughout early engagement process.	9. General concerns about potential effects of the Project on First Nations heritage and cultural resources.	To mitigate potential adverse environmental effects to heritage resources, Northcliff/SML has undertaken, or will undertake, the following actions:
			• optimized the footprint of the TSF, and eliminated surface waste rock storage, to minimize interaction with areas identified as having elevated archaeological potential;
			• before ground-disturbing activities in areas of elevated archaeological potential within the Project footprint:
			  ◦ complete shovel testing to identify whether archaeological resources are present; and
			  ◦ determine and implement appropriate follow-up and mitigation measures for found heritage resources, under the direction of Archaeological Services and including consultation with First Nations, as appropriate;
			• avoid known elevated archaeological potential zones for placement of 138 kV electrical transmission line towers where feasible; and
			• develop and implement a chance find protocol, prior to construction, to establish the process and actions to be taken in the event that a heritage resource is discovered during Project construction and operation.
			
			SML developed a comprehensive Heritage Mitigation Plan with the Government of New Brunswick to ensure the actions outlined above are implemented and result in the avoidance of adverse environmental effects to heritage resources by the Project. This plan was finalized on July 17, 2014 after consultations with First Nations. SML is offering to establish an Archaeology Working Group to communicate information regarding the archaeological program, and is funding an independent archaeologist and an archaeological monitor for First Nations in response to a request from them to do so.
			
			SML fully appreciates that using land and resources for traditional purposes is integral to First Nations culture. At the same time, Northcliff/SML has not received any information to date from First Nations, the IKS or any other source regarding specific sites of cultural importance in the Project area that are related to traditional Aboriginal use. While archaeological artifacts were found on the Project site by SML archaeologists in late 2013, their importance to Maliseet culture remains to be determined; SML is committed to working with Archaeological Services and First Nations to preserve and understand these and other artifacts that may be found (see Concern/Comment #11 below). If site-specific concerns are raised during ongoing engagement discussions, SML will work with the First Nations to address them, as appropriate.
			
			SML appreciates that the inter-generational transmission of traditional knowledge and cultural practices can occur during the use of land and resources for traditional activities, but has not been made aware of specific locations of cultural importance within the Project site where these activities take place. It is thus reasonable to conclude that the transmission of traditional knowledge will be displaced along with the associated activities

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Theme	Source	Concern / Comment	Sisson Mines Ltd.[2] Response
			and, like the activities themselves, as discussed above in response to Concern/Comment #1 and #2, will not be significantly affected by the exclusion of traditional activities from the Project site during the life of the Project and for some time into Post-Closure. Nonetheless, SML acknowledges First Nations concerns about this loss of access to the Project site, and the effect this may have on the inter-generational transmission of traditional knowledge and cultural practices. SML is supportive of a study of the sustainability of traditional First Nations resource uses in the Crown land block in which the Project is located (see Concern/Comment #1 above). As a general commitment, SML will continue to work with interested First Nations throughout the life of the Project to identify and implement feasible ways to avoid or mitigate Project effects on Aboriginal heritage and cultural resources in the Project area.
		10. Concern about the adequacy of First Nations consultation and participation in the archaeology program.	Northcliff/SML planned the archaeology program based on the EIA Terms of Reference (ToR), which were reviewed by the Crown and First Nations prior to their approval. The EIA Report prescribed completion of the shovel test pitting of areas with elevated archaeological potential as a mitigation measure, prior to construction activities being initiated, to confirm the predictions of the EIA and, if necessary, require further mitigation the environmental effects of the Project on found archaeological resources. Nonetheless, as a good faith response to First Nations concerns, Northcliff/SML undertook shovel testing in 2012 and 2013. The shovel testing will continue in 2014, along with mitigation associated with the archaeological finds in 2013. Northcliff/SML has provided, and continues to provide, multiple and meaningful opportunities for involvement of First Nations in this program including: • First Nations were advised about the archaeological field studies and were asked for field assistants and input from knowledge holders. Interviews with knowledge holders identified by the Woodstock First Nation were conducted in September 2012, and did not result in any new information about heritage resources in the Project area. • The archaeology baseline report was provided to all First Nations. Presentations on, and discussion of, the archaeology program were included in the FNEAWG meetings in April, May and June 2012, and again in October and November 2013. The baseline report was also reviewed by the First Nations' IKS/archaeological consultant. It was revised in 2013 to address comments received from First Nations, including the traditional knowledge provided by the identified knowledge holders. Archaeological Field Research Permit reports relating to field work conducted in 2011 through 2014 were made available to First Nations, and future permit reports will also be made available. • First Nations were invited for field visits of the 2012, 2013 and 2014 archaeological test pitting program. Community members were also invited to participate in a transmission

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Theme	Source	Concern / Comment	Sisson Mines Ltd.[2] Response
			line walkover. The only uptake of this offer occurred in November 2013 when SMFN requested that the First Nations' EIA and archaeological consultants visit the shovel test program. The visit was arranged by SML on November 15, 2013. • Employment opportunities for field technicians were forwarded to the First Nation representatives in advance of the programs in 2012, 2013 and 2014. Detailed consultation was undertaken prior to starting the 2013 and 2014 field programs. Measures in response to feedback included hiring of one First Nation field technician in 2011, two in 2012, and three in 2013 and 2014, and funding of a First Nation-appointed field monitor in 2013 and 2014 to observe the field work and report back to First Nation leadership. • NB Archaeological Services was involved in the training for the First Nation field technicians in 2013 and was invited for the training in 2014 but did not attend, and a similar opportunity will be provided in future field work. The Maliseet Advisory Committee on Archaeology (MACA) provided a presentation at the 2014 staff training. • SML has made an ongoing commitment to meet with First Nations to discuss the program, consider feedback, and respond as appropriate. • SML is proposing to establish and Archaeology Working Group, and is funding a First Nations independent archaeologist to facilitate communication and understanding of the archaeological mitigation that is being implemented in 2014 and beyond.
		11. Request that the archaeology program be completed during the EIA process.	While the entire archaeology program (shovel test pitting and mitigation for found resources) may not be completed prior to the end of the EIA process, SML is committed to completing it before ground disturbance, in accordance with the requirements outlined in the ToR (see response to Concern/Comment #9 above). Regarding the archaeological resources found on the Project site in late 2013, their areal extent and importance, as well as appropriate mitigation measures, cannot be determined until shovel testing in and around the Site Area is completed in 2014. That site delineation work is underway and additional artifacts have been recovered. SML is committed to working with Archaeological Services and First Nations to fully understand and preserve these and other archeological resources that may be found.
		12. Request to have traditional ceremony on site prior to any ground breaking activities.	Northcliff/SML has extended an offer to First Nations to conduct such ceremonies. A land ceremony was performed on August 21, 2014 by representatives of St-Mary's First Nation. Should First Nations want to conduct other ceremonies, SML will provide reasonable assistance to facilitate such ceremonies.

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Theme	Source	Concern / Comment	Sisson Mines Ltd.[2] Response
Cumulative Environmental Effects	New Brunswick First Nations at FNEAWG meetings and other communications during the engagement process; WFN, SMFN, and MMFN through the IKS; MSES report on behalf of all New Brunswick First Nations.	13. Concern about the ability of First Nations to practice traditional activities in their traditional territories being gradually restricted by government actions and industrial and natural resource development activities over time.	As required by the EIA Terms of Reference, a cumulative environmental effects assessment on Aboriginal use is included in the EIA Report (Section 8.13.5). The assessment determined that the Project, in combination with other past, present, or reasonably foreseeable projects and activities, will not cause significant cumulative environmental effects on Aboriginal use. The mitigation of the environmental effects on Aboriginal use is summarized in this table. Questions and concerns about past infringements of Aboriginal and treaty rights across New Brunswick from past government decisions/activities and permitted industrial activities are outside the scope of the Sisson Project EIA. They are appropriately addressed in separate discussions between the Crown and First Nations. Nonetheless, SML acknowledges First Nations concerns about the gradual restriction of the area in which they can carry out their traditional activities over the years, and the loss of access to the Project site within the CLB area. SML is supportive of a study of the sustainability of traditional First Nations resource uses in the Crown land block in which the Project is located (see Concern/Comment #1 above).
Consultation process and level of engagement	SMFN in direct communication to Northcliff/SML; New Brunswick First Nations at various consultation opportunities such as in person meetings, and by letter (throughout engagement process); MSES Report on behalf of all New Brunswick First Nations.	14. Concerns about the level of First Nations participation in the EIA process, First Nation community input to the EIA, and the opportunity to discuss the Project and its potential impacts on Aboriginal and treaty rights.	SML understands, and has acted on, its responsibilities to inform First Nations of the proposed Project and, through collaborative dialogue, to provide opportunities for First Nations to identify potential Project environmental effects on Aboriginal and treaty rights to which SML can propose avoidance or mitigation measures as appropriate and feasible. The extensive engagement program undertaken by Northcliff/SML is in support of the Crown's consultation process in undertaking its duty to consult in relation to decisions it may make about the Project. Northcliff/SML has also undertaken to gather and share available information regarding Aboriginal use of the Project area and potential adverse environmental effects of the Project on such use for consideration by the Crown. The First Nation Environmental Assessment Working Group (FNEAWG) was established by Northcliff/SML as a means of enabling direct, regular, ongoing communications between the Crown, First Nations, and Northcliff/SML related to the Project and the EIA process. First Nations are offered opportunities to present to the FNEAWG and/or raise any issues related to the Project and EIA process. Meeting agendas and locations include input from all FNEAWG members. First Nations have been offered the opportunity to chair or co-chair FNEAWG meetings but have not taken up that offer to date. The FNEAWG terms of reference incorporated feedback from First Nations, and were revised to include recognition of Mi'kmaq interests in the Project area. FNEAWG meetings were held on April 25, 2012, May 9, 2012, June 26, 2012, August 14, 2012, September 26, 2012, September 5, 2013, September 30–October 1, 2013, October 23, 2013, and November 20, 2013. A meeting specifically to address the EIA process was also held on June 27, 2013. Further, a meeting specifically to discuss fish habitat loss and

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Theme	Source	Concern / Comment	Sisson Mines Ltd.[2] Response
			offsetting projects was held on November 19, 2013. At the request of the CEA Agency, a meeting was held on September 4, 2014 to discuss potential Project effects on First Nations cultural heritage. SML supports First Nation attendance at these meetings through coverage of expenses in accordance with its policy, which was made available to First Nations. Open houses to allow for input from all interested community members were held in Madawaska Maliseet (April 23, 2012), Woodstock (April 24, 2012), and St. Mary's (April 26, 2012) First Nation communities. Northcliff/SML has regularly offered additional community meetings to First Nations, and will schedule and organize such meetings when invited. First Nations were notified about the commencement of baseline study programs, and field technician jobs were posted in First Nation communities as well as with other aboriginal training/education organizations. Northcliff commissioned preliminary ethnohistorical research to understand the written historical record and to assist with initial outreach to potentially affected First Nations. The research report was provided to First Nations. The IKS information was used to inform the EIA by considering traditional knowledge alongside the "western science" in the environmental effects assessments of each applicable VEC. The IKS was funded by Northcliff. First Nations were provided participant funding by the Canadian Environmental Assessment Agency and the Province of New Brunswick to participate in the EIA process. Northcliff supplemented such funding to further enhance such participation, including the retention of independent consultants to support First Nations technical review of the EIA Report. First Nations were afforded the opportunity to comment on the Terms of Reference for the EIA, and on the EIA Report itself, through the comment processes under CEAA. Northcliff/SML has offered site visits to all First Nation leaders or their representatives. On May 3, 2012 Northcliff organized a site visit for community members from Madawaska Maliseet First Nation and Woodstock First Nation. In addition to this site visit, Northcliff hosted a site visit for community members from St. Mary's First Nation on June 27, 2012. Northcliff/SML has always been open and transparent in its willingness to host site visits. The following information was provided to the First Nations: • twelve baseline technical studies were provided in 2012; • the EIA Report was provided to First Nations on July 19, 2013 for review before it was submitted to governments on July 31, 2013;

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			• periodic Project newsletters with information about the Project and EIA process; and • presentations were provided during the FNEAWG on various subjects, to facilitate First Nations understanding of the technical work conducted and the results of baseline studies and the EIA. These included presentations on waste and water management, and ML/ARD, for which Northcliff/SML brought their expert consultants from Vancouver. Northcliff/SML advertises available employment opportunities for field crews in First Nations communities. More opportunities are anticipated as the Project is advanced towards construction and operation.
		15. Lack of capacity funding to assist First Nations to meaningfully participate in the EIA/ consultation processes, and understand the technical aspects of conducting an EIA.	First Nations have received funding from the provincial and federal governments and from Northcliff/SML for participation in the EIA process: • Northcliff signed a capacity funding agreement with all 15 First Nations in June 2013 which included funding to assist with their participation in the EIA process and all associated consultation meetings/activities. Northcliff's funding was additional to the formal participant funding provided by the federal government under *CEAA*. • Northcliff provided funding for the IKS study which was completed by a consultant chosen by the First Nations. Additional funding was requested and approved to include Madawaska Maliseet First Nation in the IKS. • Northcliff/SML is providing funding for First Nations participation in the review of its application for Project authorization under the *Fisheries Act*, and in the development of a framework for their participation in the Sisson Project Follow-up and Monitoring Program (see also SML response to Concern/Comment #18 below). • Northcliff/SML also provides additional "in kind" support, such as holding technical briefings for First Nations with Northcliff/SML's consultants in convenient locations, and making a standing offer to hold community meetings in First Nation communities to avoid travel costs for members. • A Northcliff-facilitated field visit for Woodstock First Nation leaders to the Gibraltar mine in northern British Columbia in early February 2014 was unfortunately cancelled due to winter weather. SML remains willing to reschedule such a visit to further assist First Nations in their understanding of mine operations and associated environmental protection and mitigation activities. • Northcliff entered into a process agreement with Woodstock First Nation (WFN) in January 2013 that includes funding to WFN for consultation purposes. Northcliff sponsored WFN's lawyer to attend an IBA conference in Vancouver, and is currently in negotiations with WFN towards a long-term cooperation agreement.

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Theme	Source	Concern / Comment	Sisson Mines Ltd.[2] Response
Health and Safety	MSES report on behalf of all New Brunswick First Nations.	16. Concern about potential health and safety risks for owners of local cabin leases.	The EIA predicted no significant environmental effects on air quality, sound quality, water resources, or public health and safety with respect to owners of the local cabin leases (Section 8.12.4 of the EIA Report). SML will implement a complaints procedure and a concerns "hotline" in order to understand and investigate unexpected environmental effects of the Project, and to inform remedial measures as may be required.
Accidents and Malfunctions	New Brunswick First Nations at various consultation meetings such as FNEAWG meetings throughout the engagement process; MSES report on behalf of all New Brunswick First Nations..	17. Concern about the potential environmental effects of a major failure of the TSF embankments.	SML recognizes that a major failure of the TSF embankments, in the very unlikely event that it occurred, could cause significant adverse environmental effects including possibly on Aboriginal use. Thus, the embankments have been conservatively designed in consideration of a specific severe Inflow Design Flood and a Maximum Design Earthquake to meet and/or exceed the requirements of the Canadian Dam Safety Guidelines. Using accepted methodologies to estimate the failure probabilities associated with a particular tailings facility, the proposed TSF for the Sisson Project would have an annual probability of failure of between 1-in-1 million to 1-in-10 million. Further information to supplement the environmental effects assessment presented in Section 8.17.2.1.1 of the EIA Report in this regard was provided in response to provincial and federal information requests related to the Project (see Section 1.2 of Northcliff/SML's IR response document). To ensure that required factors of safety are maintained, a TSF Operation, Maintenance and Surveillance (OMS) manual will include operating and inspection procedures to ensure that the TSF is operated in a manner consistent with the design principles. As called for by the Canadian Dam Associations' Dam Safety Guidelines (Canadian Dam Association 2007), a thorough Dam Safety Review by an independent geotechnical engineer will be carried out at five-year intervals. Additionally, engineering Inspections of the TSF are typically performed annually or semi-annually. Approval will be required for construction of each TSF embankment stage from the Department of Environment and Local Government under the *Clean Water Act*. Emergency response procedures will be developed for and contained in the Emergency Preparedness and Response Plan (Section 3.4 of Appendix D in the EIA Report). SML is confident that the Project TSF has been designed, and will be built and operated, according to international good practice to be as safe as possible at a modern mining operation.
Monitoring	MSES report on behalf of all New Brunswick First Nations.	18. Request for First Nation involvement in follow-up and monitoring programs.	SML welcomes the participation of First Nations in follow-up and monitoring of programs such as archaeology, fish habitat and wetland offset/compensation, water quality, and other areas as may be determined. SML is committed to establishing and funding a Community Liaison Committee (CLC) for these purposes, starting after EIA approval of the Project and continuing for the life of the Project and into Closure (See SML's ESMS in Appendix D of the EIA Report). The CLC would include First Nation representatives as well as representatives of other communities and stakeholder groups. Following EIA approval of the Project, SML will convene meetings of potential representatives on the CLC to

Table 8.13.5 Summary of Concerns Raised by Aboriginal Groups (Revised November 10, 2014[1])

Theme	Source	Concern / Comment	Sisson Mines Ltd.[2] Response
			determine its terms of reference, operational procedures and the funding needs for CLC participation by the representatives of First Nations and others. SML will also work to involve First Nations to the extent possible in the conduct of follow-up and monitoring programs where First Nations can provide staff, team members or monitors, or traditional knowledge. During the construction and operation of the Project, SML will operate a "concerns call hotline" that will be available for anyone, including First Nations, to contact Project management regarding any environmental or other operational concerns they may have. At a September 4, 2014 meeting with First Nations and the federal Crown, SML undertook to provide more information about how SML will involve First Nations in the development and implementation of follow-up and monitoring programs. SML prepared a draft "Sisson Project: Proposed Framework for First Nations Participation in the Follow-Up and Monitoring Program" which was discussed at a FNEAWG meeting held on October 8, 2014. This includes a Follow-up and Monitoring Sub-Committee within, and reporting to, the Community Liaison Committee. First Nations undertook to provide SML with a second draft of the document based on discussions at that meeting. SML is willing to explore with First Nations the possibilities of having monitoring programs incorporate traditional knowledge or similar study methodologies as they can contribute to achieving defined monitoring program objectives.
Closure and Reclamation of the Project Site	WFN, SMFN, and MMFN, through the IKS; New Brunswick First Nations at FNEAWG meetings; MSES report on behalf of all New Brunswick First Nations.	19. Concern that the Project site, and the ability of First Nations to undertake traditional activities on it, will not be restored to the current state.	During closure and reclamation of the Project site, it is not technically or economically feasible to fully restore it to its current state while ensuring that long-term environmental effects are not significant. SML is willing to work with interested First Nations to design the closure plan to optimize the availability of reclaimed lands for traditional activities by First Nations as mitigation for the potential environmental effects on Aboriginal use.
		20. The opportunity for First Nations to participate in planning for the decommissioning, reclamation and closure of the Project site, and in related monitoring.	SML is committed to ongoing engagement with First Nations during all phases of mine life, including closure and reclamation. One of the roles of the Community Liaison Committee (see Concern/Comment #18 above) would be to contribute to closure planning, especially regarding definition of the desired end land uses of the Project site, how can they be achieved, and how the success of closure activities will be monitored. These end land uses can be developed to include Aboriginal uses as appropriate as mitigation for the environmental effects of the Project on Aboriginal use.

The potential environmental effects are limited to requiring people to change their Current Use activities to locations outside of the Local Assessment Area (LAA) for Current Use (an area of approximately 1,446 ha that encompasses the PDA) due to the loss of access to the LAA as a result of an exclusion zone that will be established for safety purposes throughout Construction and Operation of the Project. This environmental effect may require some of those currently using the PDA to become familiar with and use new areas.

There are 8,902 km^2 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^2 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.

SML respects the importance of this traditional use to the Aboriginal community, and the opportunities it provides for the transfer of traditional knowledge. At the same time, the traditional activities described (*e.g.*, hunting, fishing, and gathering) will not be hindered by a lack of access to traditional resources in the LAA since First Nations will continue to have access to, and use of, the land and any resources that are present in the large area of Crown land outside the LAA. Additional scientific research conducted after completion of the Draft EIA Report (documented in Appendix F) supports the view that those resources are available and secure in proximal areas to the LAA, and that the lack of access to resources within the PDA is not anticipated to be a limiting factor with respect to continuing Current Use. As noted above, it is acknowledged that First Nations are nonetheless concerned about the sustainability of their traditional land and resource uses in the CLB, and SML has stated that it is supportive of a long-term study of the matter with other stakeholders (*e.g.,* Province of New Brunswick, forestry companies).

The information in Appendix F demonstrates that the habitat types and species that are noted as being used for traditional purposes in the LAA are readily available in the areas adjacent to and well beyond the PDA as the distribution of these resources spans the CLB. For example, based on land use data provided in Appendix F, the average percent of loss of each forest stand type within the LAA is 1.9% of the total area of the CLB, and these forest stand types are distributed throughout the CLB.

Appendix F also notes several species of plants, animals and fish that were identified as important to First Nation groups in the general area of the Project; the majority of the species mentioned, including moose and deer, are common within New Brunswick and have secure populations.

Participants in the IKS note the use of many brooks in the PDA and general area of the Project for trout fishing and harvesting. It is noted in Appendix F that brook trout are commonly fished species. Field surveys conducted for the Project indicate that brook trout was the most prevalent species identified in the LAA but that approximately 76% of the brook trout in the PDA were less than 10 cm in length which likely are not suitable for consumption due to their small size. The brook trout outside the PDA, however, were reportedly larger than those in the PDA and would be more suitable for traditional use and consumption than those identified in the PDA.

Calamus root was identified as being used for ceremonial purposes in the IKS. Golden thread is an herbaceous plant that is common within the LAA and CLB. Black ash which has been identified as important for traditional use is not as prevalent in the LAA as it is in other areas of the province as it is

not commonly found in larger diameters. A stand of black ash trees were identified along the transmission line right-of-way at Keswick; however, only part of the stand will be affected by Project activities and access to these trees for First Nation could be facilitated.

The IKS identified the concern that the Project will interrupt a large area of contiguous Crown land, and Fist 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^2 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, as discussed above. 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 Water Resources (Section 8.4), the Aquatic Environment (Section 8.5), the Terrestrial Environment (Section 8.6), the Vegetated Environment (Section 8.7), and the Wetland Environment (Section 8.8) have been assessed as a result of ground disturbing activities necessary during Construction. The assessment of each of these VECs concluded that the Project would not result in significant environmental effects on the VEC. As such, the availability and sustainability of resources in the general Project area will not be substantively affected by the Project, and these resources will continue to be available for use by First Nations. 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.

It is recognized that the traditional use of land and resources is vitally important to Aboriginal culture, and that the displacement of those traditional uses from within the LAA during the life of the Project may have a consequent effect on Aboriginal culture. Since no sites of particular cultural or spiritual importance have been identified within the LAA, it can only be concluded that there will be no Project-related environmental effects on Aboriginal cultural heritage beyond those associated with Project-related environmental effects on the use of land and resources for traditional purposes by Aboriginal persons.

SML 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 8.13.6 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 8.13.6 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
Past or Present Projects or Activities That Have Been Carried Out	
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
Potential Future Projects or Activities That Will Be Carried Out	
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

Cumulative Environmental Effects

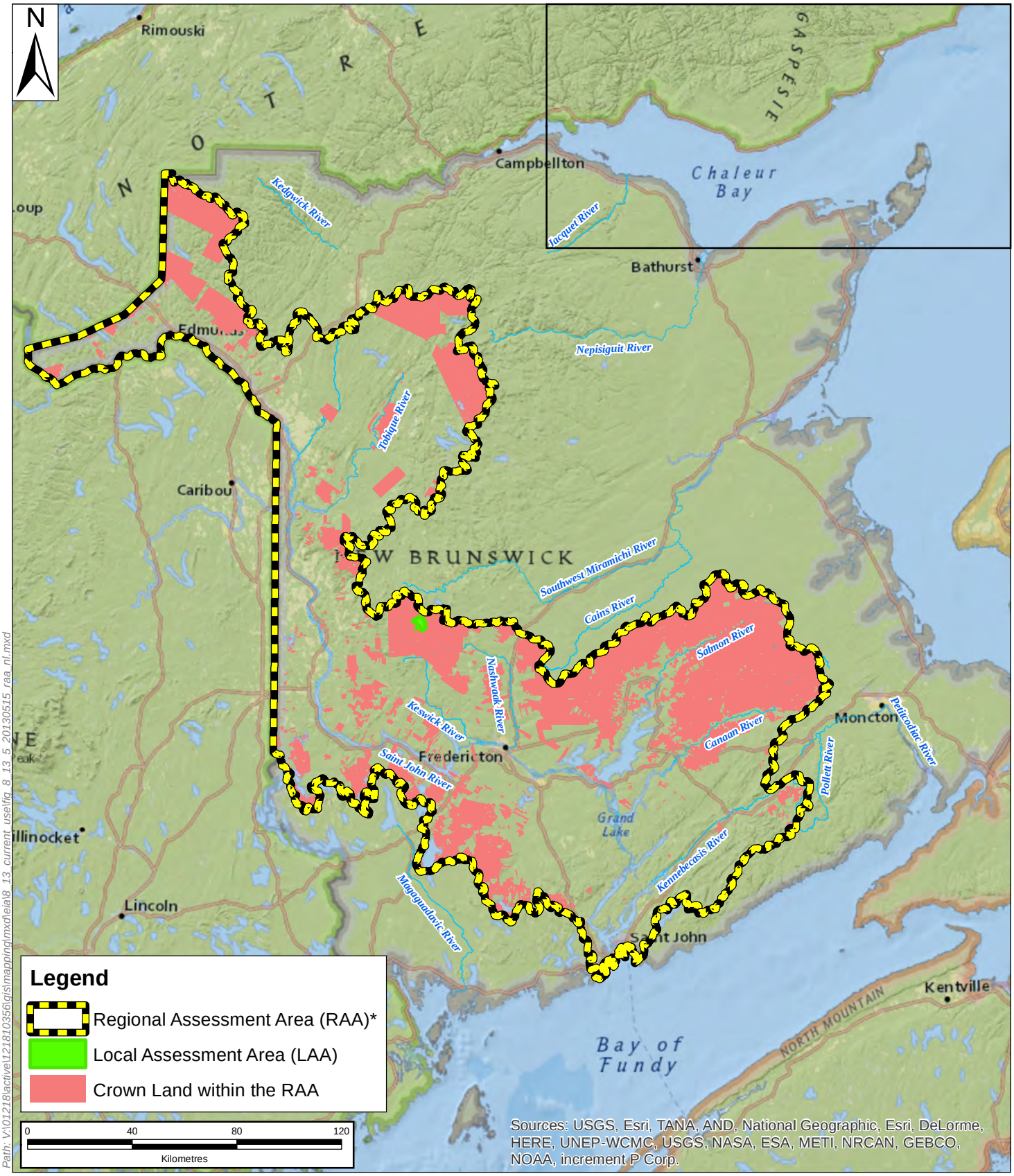
Notes:

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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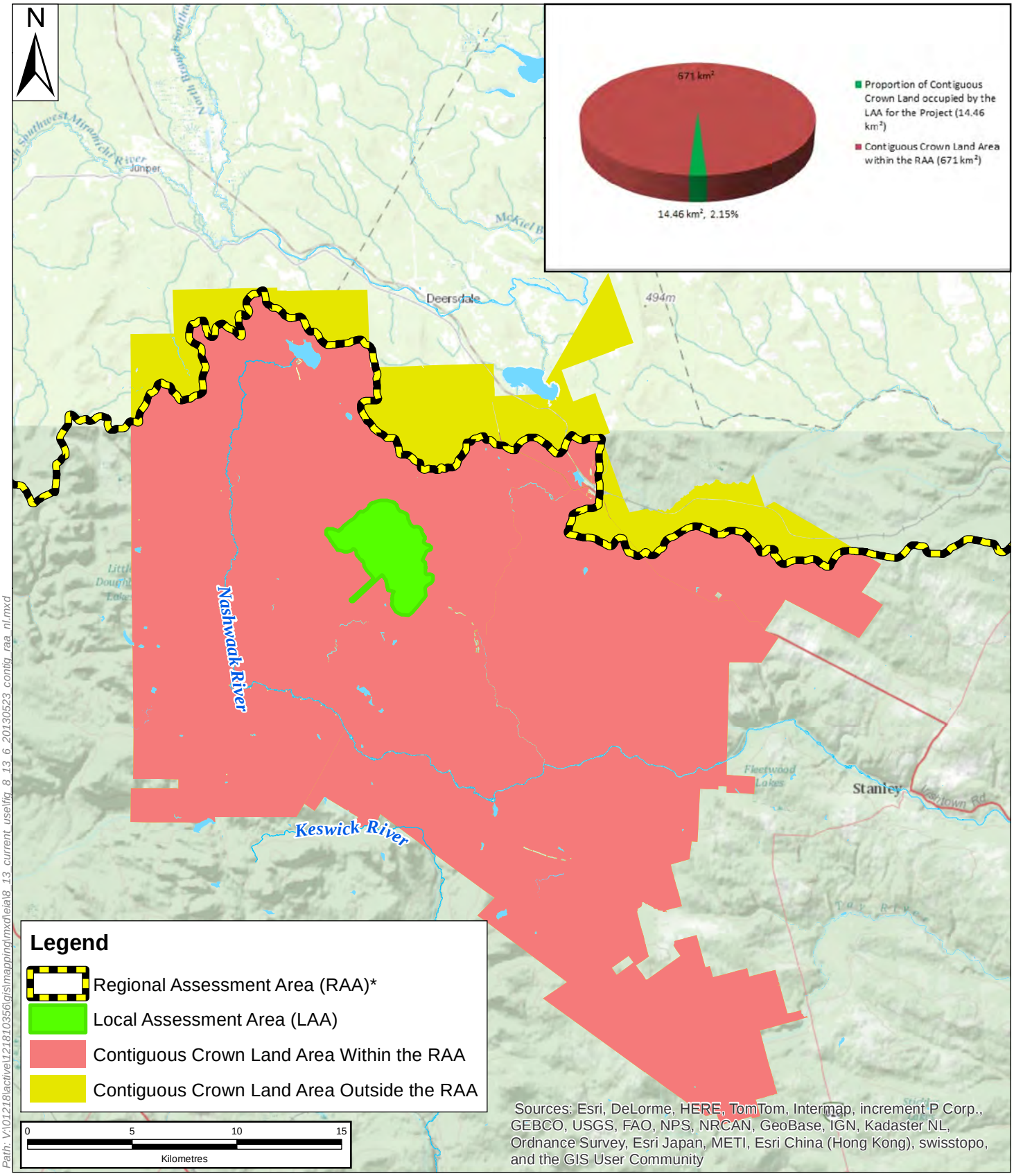
NOTE: THIS DRAWING ILLUSTRATES SUPPORTING INFORMATION SPECIFIC TO A STANTEC PROJECT AND SHOULD NOT BE USED FOR OTHER PURPOSES.

Proportion of the Regional AssessmentArea (RAA) Occupied by the Local Assessment Area (LAA) for the Project Sisson Project: Environmental Impact Assessment (EIA) Report, Napadogan, N.B. Client: Sisson Mines Ltd.	Scale: 1:2,000,000	Project No.: 121810356	Data Sources: ESRI ArcGIS Online NHN NBADW * Adapted from Goddard (1996)	Fig. No.: 8.13.5	Stantec
	Date: (dd/mm/yyyy) 23/11/2014	Dwn. By: JAB	Appd. By: DLM		

Map: NAD83 CSRS NB Double Stereographic



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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 Contiguous Crown Land Occupied by the Local Assessment Area (LAA) for the Project Sisson Project: Environmental Impact Assessment (EIA) Report, Napadogan, N.B. Client: Sisson Mines Ltd.	Scale: 1:250,000	Project No.: 121810356	Data Sources: ESRI ArcGIS Online, NHN, NBADW	Fig. No.: 8.13.6	Stantec
	Date: (dd/mm/yyyy) 23/11/2014	Dwn. By: JAB	Appd. By: DLM		

Map: NAD83 CSRS NB Double Stereographic

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 8.13.6. 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 8.13.6. The environmental effects of future Industrial Land Use in combination with those of the Project have been ranked as 0 in Table 8.13.6 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 8.13.6 since Planned Residential Development is limited within the RAA, and would be located on private land.

Recreational Land Use (Future) 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 8.13.6. In particular, as evidenced by the further research provided in Appendix F, wildlife resources are abundant in the RAA. While the wildlife resources of the PDA will not be available for Aboriginal use for a period of time, the availability of the secure species in the CLB and in New Brunswick is such that there will be no significant environmental effects on Aboriginal use of these species. Dust, noise and other Project emissions will be largely limited to the Project site and the immediate area surrounding it, and will be monitored and closely managed during construction and operation of the Project to ensure that their environmental effects on land and resources outside the LAA are avoided or minimized and not significant.

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. Although a new Strategy for Crown Land Forest Management was recently

released by the former provincial Government, it is not known how this strategy will be administered or how increased cutting on Crown land will be apportioned and managed by the Province of New Brunswick. It can only be presumed that such activity, if it proceeds in the RAA, will be managed in a sustainable and responsible way by the Province, as the land manager for Crown land in New Brunswick, and in consideration of other planned or active developments such as the Sisson Project to an extent that cumulative environmental effects are not significant, while respecting the traditional use values of Aboriginal people on Crown land. 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 8.13.6.

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. SML 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.

However, though the EIA confidently predicted no significant environmental effects to traditional foods, SML will monitor potential environmental effects at 2 to 3 traditional use sites identified by First Nations for harvesting of country foods (*e.g.,* fiddleheads, berries, medicinal plants). This will be carried out prior to Construction, and again within 5 years of the start of Operation.