Part C – Secwepemc

Revelstoke Unit 6 Environmental Assessment Certificate Application

Prepared by: Adams Lake Indian Band, Neskonlith Indian Band, Splatsin, Simpcw First Nation, Shuswap Indian Band, and Little Shuswap Lake Indian Band

Simpcw First Nation
People of the Rivers

LITTLE SHUSWAP LAKE INDIAN BAND

CLCAHL - SPLATSIN - SEKEMAWS - SKWATIS - SPLMIWAYS -
WORKING TOGETHER TOWARD INDEPENDENCE

SHUSWAP BAND

Enclosed is the first draft of our submissions respecting the potential adverse impacts upon our Aboriginal title and rights, which may arise from the Revelstoke 6 upgrade project. This draft is provided to you on the understanding that these submissions will be treated as preliminary, and that we will have the opportunity to make further submissions in due course.

Unfortunately, given the limited time frames and budget, we have been unable to complete our community consultation process and analysis. As a result, we submit this draft in a state of significant concern for the validity of the EA process as a means to discharge the legal obligations of the Crown to the Secwepemc Nation regarding the impacts to our Aboriginal title and Rights from the installation of a sixth turbine at the Revelstoke Generating Station. We further insist that the BC EAO and BC Hydro recognize that their consultation and engagement requirements with the Secwepemc are ongoing and incomplete.

We also wish to clarify that as the 6 participating Secwepemc Bands, we cannot fully represent or address the interests of the Secwepemc Nation, who as a whole, are the proper title holders for Secwepemcúlecw. It is the Nation, alone, that can provide its free, prior and informed consent to discharge the Crown of its legal obligations.

In particular, we note the following:

1. BC Hydro's lead consultant provided socio-economic information on the proposed project a significant period of time after we were told that it would be received. This has left us with insufficient time to complete the critical review and response to the socio-economic information that was eventually provided. In addition, the information that was provided was deficient resulting in a large amount of discussions between BC Hydro's consultant and representatives of the Secwepemc.
2. Funding was not provided until very recently. Given that the Secwepemc could not incur significant costs in the absence of such funding, as BC Hydro was aware, there was a lengthy delay in the commencement of the work required.
3. The impacts of 1 and 2 have resulted in insufficient time to conduct a traditional socio-economic and cultural heritage impact assessment and a cumulative impacts assessment.
4. The lack of rigorous archaeological impact modeling and ground truthing is a concern to the Secwepemc people and needs to be conducted forthwith. In the absence of this, our submissions cannot be considered to be complete.
5. We have not been able to examine the historic impacts of the construction of the Revelstoke dam and its operation, which are important in assessing the additional impacts that will result from constructing a 6^{th} generating unit at the Revelstoke Generating Station.

Once we have had more time to conduct a more thorough community consultation process, and been provided with more information on the project, we anticipate that there will be considerably more submissions being made by us. This is a matter of utmost importance to the Secwepemc peoples and thus we must take great care in ensuring that all concerns are heard and, if possible, addressed.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

12.0 ABORIGINAL CONSULTATION

12.1 Aboriginal Interests

12.1.1 Secwepemc Bands - General

A. PAST AND PLANNED CONSULTATION ACTIVITIES

BC HYDRO TO FILL IN

B. PROPOSED CHANGES TO THE ABORIGINAL CONSULTATION PLAN

BC HYDRO TO FILL IN

C. KEY ISSUES AND CONCERNS RAISED, THE PROPONENT'S RESPONSES TO THOSE ISSUES AND CONCERNS, AND THE STATUS OF RESOLUTION

SECWEPEMC PARTIES AND BC HYDRO TO FILL IN

1) comments on EIA provided but have not received a response
2) ongoing discussions with BCH regarding what is in scope with Rev 6 and what will be part of the broader agreement, broader issues and agreement

D. LOCATION MAP OF SECWEPEMC PARTIES COMMUNITIES IN RELATION TO THE PROJECT LOCATION

BC HYDRO TO FILL IN

E. TRADITIONAL ECOLOGICAL KNOWLEDGE AND TRADITIONAL LAND USE INFORMATION

SIMPCW FIRST NATION DISCLAIMER: Simpcw First Nation has agreed to provide limited cultural, socio-economic and historical information specifically relevant to this collaborative reporting effort between ourselves and the Secwepemc signatory communities to the Rev-6 EA Part C project. We include this disclaimer which informs the reader that we provide information acknowledging that certain data has been interpreted differently by various entities over the course of history. However, in order to maintain the integrity of that data, we provide here only what we can verify through the most reliable records available to us.

The participation of Simpcw First Nation in this project is without prejudice to the Aboriginal rights, including title, of Simpcw First Nation and to its position that it holds Aboriginal rights, including title, to the entire Simpcw Territory, within which parts of this proposed project is being undertaken.

Ethnobotany

Peoples' impacts on their environment and, in particular, changes in distribution of plant species, based on cultivation and collection of culturally-significant species, are increasingly being identified by researchers as wide-spread. However, it has only been in the past few decades that academics and other researchers have become aware of the sophisticated techniques Indigenous Peoples have employed to manage and maintain ecological resources (see Lewis and Ferguson 1988; Turner *et al.* 1990; Anderson 2005; Mann 2006). These methods include controlled burning, foraging strategies, selective harvesting, and cultivation techniques. Turner *et al.* (1990) describe the use of resource management strategies including controlled burning, by which, Secwepemc were able to modify a particular habitat to maximize production of certain fruits and edible roots. Controlled burning was formerly used to manipulate the habitat in areas such as blueberry and huckleberry berry picking areas, as well as hazelnut bushes. Burning on Crown land is no longer allowed and as a result, some of the prime berry picking areas have deteriorated (Turner *et al.* 1990:13). Adding to this, the valley floors and lower side hills in the region have also been heavily grazed and trampled by livestock. In some places, as a result of this grazing, some of the original character of the vegetation has been lost (Turner *et al.* 1990:17). However, despite these significant impacts and the ongoing effects of development on the Secwepemc Territory, the Secwepemc People continue to practice their traditional land use as well as actively manage and maintain ecological resources (see: Caretaker Responsibilities section for more information).

The ethnobotany of Secwepemc Territory is known about, in a large part, due to the efforts of Dr. Mary Thomas, a late Neskonlith Band member, whose lifelong initiatives to teach and pass on her vast knowledge of Secwepemc practices left a legacy of knowledge to her community and surrounding communities. In addition, Dr. Nancy Turner's extensive work in the region, at times in conjunction with, and learning from Dr. Thomas, has aided in understanding the ethnoecology of this area (see Hunn *et al.* 1998; Turner 1977, 1979, 1988a, 1988b, 1997, 2014; Turner *et al.* 2000a, 2000b, 1998, 1987; Peacock and Turner 1998). Further, interviews of Elders and other band members, knowledgeable about the plants and ecosystems within their territories, have provided researchers with extensive knowledge about the traditional lifeways and environment of this area, see section 12.1.1.f. of this report, see also Traditional Use Study (TUS) conducted for/by Adams Lake (Adams Lake *et al.* 2013a, 2013b; Adams Lake and Neskonlith 1999, 1998; DMCS 2014; Elias 2009), Little Shuswap Lake (Ernst 2000), Neskonlith (Adams Lake *et al.* 2013a, 2013b; Adams Lake and Neskonlith 1999, 1998; DMCS 2014; Elias 2009; Ignace and Ignace 2011;), Shuswap (DMCS 2014; Elias 2009; K/KTC 1998; Shuswap 2008), Simpcw (Simpcw FN 2009; Simpcw FN 1988) and Splatsin (Adams Lake *et al.* 2013a, 2013b, 2013c; DMCS 2012, 2014; DMCS and Splatsin 2011; Elias 2009; Splatsin 2008; Splatsin *et al.* 2012).

Plants and fungi of cultural significance include: alder, bluebunch wheatgrass, fescue, (Morrissey 2009:10) dog-tooth violet corms (Palmer 1975:29), alum-root, balsam fir, balsamroot, birch fungus, biscuit root, bitterroot, black cottonwood, black hawthorn, blackcaps, blueberry, bog cranberry, boxwood, bracken fern, buffalo berries, bulrush, cascara, cattail, chocolate lily, choke cherry, cottonwood mushroom, cow parsnip, Devil's club, Douglas fir, Engelmann spruce, glacier avalanche lily, hazelnuts, high bush cranberries, hemlock, hemp, horsehair (lichen), huckleberry, juniper, kinnikinnick, Labrador tea, lanceleaf spring beauty, lodgepole pine, lungwort, mariposa lily, morel mushrooms, native carrot, nodding onion, oak fern, Oregon grape, oyster mushroom, paper birch, pasture sage, pigweed, pine mushroom, plum, ponderosa pine, poison ivy, Prince's pine, puffball mushroom, raspberry, red cap berries, red willow, rose, sagebrush, Saskatoon berry, shaggy mane mushroom, shrubby penstemon, slough sedge, soapberry, sphagnum moss, spring beauty, stinging nettle, sub-alpine fir willow, tamarack, thimble berry, tiger lily, turnip, valerian, water hemlock, wapato, waxberry, western redcedar, white birch, white poplar, white spruce, whitebark pine, wild asparagus, wild goose berries, wild lupine, wild onion, wild rhubarb, wild rice, wild strawberry, wild tarragon, wild thistle, wolf lichen, yarrow, yellow avalanche lily, yew (Adams Lake, Little Shuswap Lake, Neskonlith, and Shuswap databases [CKKs]). See also section 12.1.e. for additional information on fauna and flora used by the Secwepemc.

The extensive knowledge of plants within the Territory is further indicated by the Secwepemctsin names for plants, which is evidence of long-term occupation, and vast utilization of the area. For example, Simpcw Archives currently has a record of 143 Secwepemctsin words for plants utilized in Simpcwul'ecw (Simpcw Territory), 16 Secwepemctsin words for 'unidentified plants' utilized in Simpcwul'ecw, and 76 Secwepemctsin words for 'other' plant terms utilized in Simpcwul'ecw, giving a total of 235 Secwepemctsin words relating to plants and ethnobotany (Eustache 1999). A majority of these plants and terms relate to the Study Area. When compared with the 97 plants listed above, Simcpw-Secwepemctsin plant names/terms, Simpcw has Secwepemctsin names for 74 of the 97 plants listed.

Ecology

People are, and always have been, active players in the history of the environment and landscape they inhabit. Just as cultural practices, e.g. hides for clothing, food choices based on seasonality, and construction of homes, such as the winter-dwelling *c iśtkten* (s-eesk-ten) or pit house which can help to identify Secwepemc presence on the landscape[1], have been shaped by the environment of cold dry winters and which animals live in the area, so too, people have had significant impacts to the environments where they reside.

The large Secwepemc Territory encompasses ten[2] distinctive biogeoclimatic zones, described as the: Boreal Altai Fescue Alpine Zone, Bunchgrass Zone, Engelmann Spruce-Subalpine Fir Zone,

[1] "Pithouses are not known to have been used by the nomadic Ktunaxa and are absent from almost all of the Kootenay River, up which salmon were prevented from ascending by falls on its lowermost course." (Choquette 1997: 30). Therefore, any evidence of pithouses in the vicinity of the Study Area would be Secwepemc (supported by Borden 1956 in Choquette 1997:16.

[2] Secwepemc Territory contains nine biogeoclimatic zones in previous categorization systems, and the past names vary slightly.

Interior Cedar-Hemlock Zone, Interior Douglas Fir Zone, Interior Mountain-Heather Alpine Zone, Montane Spruce Zone, Ponderosa Pine Zone, Sub-Boreal Pine-Spruce Zone, and Sub-Boreal Spruce Zone (MFLNR 2016; see also Meidinger et al. 1991).

- Boreal Altai Fescue Alpine Zone (Alpine Tundra), has the harshest climate of any of the zones in BC, the average temperature of this zone is below zero for 7-11 months of a year (BC 2016).
- Bunchgrass Zone, bluebunch wheatgrass and sagebrush dominate this grassland zone.
- Engelmann Spruce-Subalpine Fir Zone, spruce (Engelmann and white) in the canopy with subalpine fir in the understory, dominate this zone. Intermediary stages of ecological succession within this zone includes lodgepole pine. In addition, within this zone, there are aspen, paper birch, black cottonwood, whitebark pine, limber pine, alpine larch, Douglas-fir, western redcedar, western hemlock, western white pine, mountain hemlock, and amabilis fir.
- Interior Cedar-Hemlock Zone, has more diversity amongst the trees than the other zones. western redcedar, western hemlock, and some interior spruce, Engelmann spruce, and white spruce, subalpine fir, black cottonwood, lodgepole pine, trembling aspen, paper birch, Douglas-fir, western larch, western white pine, and grand fir.
- Interior Douglas Fir Zone, in addition to Douglas fir, Engelmann spruce, white spruce, montane Spruce, sub-boreal spruce, lodgepole pine western redcedar, western larch, and grand fir, trembling aspen, paper birch, and black cottonwood, also occur.
- Interior Mountain-Heather Alpine Zone, mountain heather, and wildflowers dominate this zone, which makes up a relatively small percentage of the provinces zones.
- Montane Spruce Zone, is dominated by Engelmann spruce, and subalpine fir.
- Ponderosa Pine Zone, ponderosa pine is the primary species within this zone, with occasional white and Engelmann spruce.
- Sub-Boreal Pine-Spruce Zone, lodgepole pine dominates this zone, with white spruce occurring secondarily. Engelmann spruce, white spruce, black spruce, trembling aspen also occur in some areas.
- Sub-Boreal Spruce Zone, Engelmann and white spruce dominate this zone, with some lodgepole pine, subalpine fir, trembling aspen and Douglas fir, black cottonwood, and black spruce.

The climate varies considerably from the dry area near Kamloops to the wet Columbia Mountains (Ignace 1998:206), and has rolling plateaus, high mountain country, extensive grasslands, wet forests and the fish-rich habitat of the Fraser and Thompson Rivers (Palmer 1975:31), and the important fish habitat (Lindsay 1994:1) of the Columbia River.

This report focuses on groups that form the Eastern Secwepemc (Splatsín, Sexqeltqin (Adams Lake), Skw'lax (Little Shuswap), Neskonlith and the Kenpesq't (Shuswap Indian Band), and, on the northern Secwepemc group known as Simpcwemc, whose territory, Simpcwul'ecw, partially envelops, and is impacted by, much of the Rev6 and Kinbasket Reservoir developments. Another way in which to describe divisions within the Secwepemc, are the "Shuswap Lake Division" and the "North Thompson Division" (Ignace 1998:204), which are ethnographic divisions from within in the larger Secwepemc Territory presented by Teit (1909). See also Teit (1909:465), where he outlines these divisions and estimates the populations for 1909. example, Teit

(1909:523) describes a First Nations group, who live: "…nearly in the heart of the Rocky Mountains, around the head waters of North Thompson River, the Yellow Head Pass, and Jasper House" whom he named the Upper North Thompson band: east and north [their hunting grounds] . . . include... part of the Big Bend of the Columbia, part of the Rocky Mountain region. Some of these people apparently became part of a group known as the Kinbaskets (Shuswap Band), who according to Teit (1909: 460,467), were named for Kenpesq't, a North Thompson Chief. Other Bands also trace their genealogy and family connection to the Kinbaskets (Shuswap Band), and can trace ancestry to residents of the local study area for example, one or more Simpcw chiefs have genealogical connections to the Kinbasket chiefs of the 1800s[3].

The ecology of the landscape informs the archaeological record of this territory. For example, the migrations of large game throughout the plateaus are evidenced by the lithic tool technologies, with evidence of spear-hunting for the last 11,500 YBP giving way to bow hunting technology beginning around 2,400 YBP (Morressy 2009:37). While the tools people have used, to hunt in this area, continue to change, Secwepemc people still hunt large game including moose, deer and elk (see section 12.1.1.f. for contemporary hunting information).

Secwepemc (General)

Seasonal Round

Ron and Marianne Ignace have broadly characterized the Secwepemc seasonal round:

> *The Secwepemc seasonal round makes strategic use of the ripening and harvestability of roots and then berries at successively higher elevations between May and August, followed by the main season to fish for four species of salmon and dry large quantities (July – October) at different fishing locations, and by the main ungulate hunting season in early fall. Especially the summer to early fall months, thus, saw people travelling to places some distance away from their winter villages.*

The traditional seasonal round of Eastern Secwepemc peoples emphasized both river-based salmon fishing and the upland hunting of larger animals like deer, elk, moose, and caribou. Plants, particularly berries as well as some roots, were a major component of the diet. Traditionally, families moved between river and upland gathering locations seasonally (M. Ignace 1998:206; M. Ignace 2000:27-28; Ernst 2002:44-53; LeBourdais 2009). Teit noted that members of Shuswap Lake Division communities hunted on Salmon River, Columbia River near Revelstoke, around Mabel Lake and Sugar Lake, and through to the Upper Arrow Lake (Teit

[3] Kenpesq't's English name was Paul Ignatius Kinbasket and he was the son of Chief Yelhillna, who had begun the practice of seasonal migrations to the Columbia River from the winter village on Adams Lake (Dehart 1988:6 in Choquette 1997:15). This also indicates that 'historic' references to Adams Lake may be in Simpcw Territory. NTIB/Simpcw Chief Peter (Tseynitse7) Tenmesqet (Simpcw Archives in-house genealogy Record Number, RN-1) d. 1863, possible brother to Paul Kinbasket Father: Tseynitse7.
b) NTIB/Simpcw Chief Andre Tenmesqet (RN-2) b. 1832, d. 21 Oct 1919 Chu Chua, Father: Peter Tenmesqet (RN-1), Mother: Qwilcetkwe (RN-468).

1909:455). Teit noted, too, that "small parties of Stonies were wont to repair to Columbia River, where they fished with the Kinbasket" (Teit 1909:524).

The pattern of river fishing and upland hunting continues today – and the fact that people live year-round in homes on the reserves or in area towns like Vernon, Salmon Arm, Chase, or Sicamous has not changed the interest in these activities. Salmon fishing along rivers like the Shuswap and the Columbia (until 1938, when the completion of the Grand Coulee Dam blocked upstream passage) remains the focus of sustenance food gathering during the summer and early fall. Lake fishing for trout and whitefish takes place on many of the region's lakes; Mabel Lake, for example, is a significant inland trout fishing lake. Ignace asserts that the food procured by hunting animals like deer, elk and moose was almost as important a dietary source as fishing (M. Ignace 1998:207).

Today, too, seasonal salmon fishing and hunting, along with the collecting of berries, remain important cultural and sustenance activities. Plant gathering continues to provide Secwepemc people with food and medicines, just as it did for the previous generations of Secwepemc (Ernst 2002:35; Ayotte 2010). Berries like huckleberries and blueberries are a significant source of food even today. Medicines are collected from forested areas around the territory. And plant materials, like bark and roots, are used for the production of baskets. Community members talk of a continuing desire to use upland and riverine areas of the territory for the harvesting of foods that are central to a traditional, healthy and decolonized diet.

Adams Lake and Neskonlith also provide a detailed description of the seasonal round in their traditional use research (Adams Lake and Neskonlith 1999). In general terms, the work of these communities shows that the Secwepemc "maintained semi-permanent villages where food and technology were stored, and a network of specialized basecamps in the vicinity of particular resources which were extracted, processed and transported to the village. The basecamps were situated to take advantage of seasonal resource availability in each [region of Secwepemcúlecw]" (Adams Lake and Neskonlith 1999:10). The traditional use data from Neskonlith and Adams Lake also shows how significant contemporary and remembered harvesting is to local diets.

Table **1** shows the number of harvesting sites recorded by the research team for key species within a single research project (Adams Lake and Neskonlith 1999:32-35). The below number of harvesting sites are used to indicate the importance of these activities and are by no means an exhaustive enumeration of these sites. Additional sites have been recorded in other studies and are anticipated in the project-specific Cultural Heritage Assessment (CHA) to be conducted for the Revelstoke 6 Project.

Table 1: Adams Lake and Neskonlith Traditional Use Site Data (Selected Species)

Technique	Species	Number of Harvesting Sites
Hunting (large game)	Deer Moose	1403 382
Hunting (small game)	Grouse Pheasant	380 69
Trapping	Beaver	30

Technique	Species	Number of Harvesting Sites
Fishing	Trout	947
	Salmon	869
	Kickininee	262
	Ling	80
Plant collection	Berries	450
	Food	160
	Medicines	110

The Shuswap Indian Band describes the seasonal round in their traditional use study:

> *In the thousands of years preceding contact, survival for the Secwepemc people required a complex understanding of the natural world that surrounded them. The annual seasonal rounds of the Secwepemc were based on organizing their routines around the changing of the seasons and the availability and location of the staple food sources on which they depended (Shuswap Indian Band 2008:15).*

The Shuswap Indian Band continues its description of the seasonal round by quoting an Elder:

> *Our people traversed through this area. The Shuswap Nation - they had trails all over. We had trails there coming up from the Arrow Lakes, down towards Castlegar… we got trails coming through the Shuswap… we had trails all over and all along through the mountains and the Monashees, we had passes, people traveled right up into the Chu Chua area, or the Valemont area… the headwaters of the northern tip of the - at that point in time the Columbia River. Our people traveled back and forth through here (Shuswap Indian Band 2008:15).*

Drawing on Teit's work, the Shuswap Indian Band notes that the Secwepemc had five seasons (Shuswap Indian Band 2008:16-22; see
Table **2**). Drawing on Ignace's work (R. Ignace 2008:144-145), the Shuswap Indian Band's seasonal round highlights the experiences of many Secwepemc communities, particularly those who relied on the resources in the eastern parts of the territory.

Simpcwemc, for instance practiced seasonal rounds that integrated both riverine (anadromous fish, elk, deer), and high elevation harvesting (Mountain Caribou, Mountain goat and Big Horn sheep), and trade in prepared goods (hazelnuts) at given locations, at specific times of the year (Simpcw 1999:69) east and south of the Scrip Range, in the Columbia Valley. Of particular significance are the fall hunting and winter trapping rounds that would last weeks at a time, and would include the Local Study Area (LSA), as defined on page 17, on both sides of the Columbia, and into the Athabasca drainage (Simpcw 2011:58-59). This segment of the seasonal round required the collaborative and well planned efforts of skilled hunters and processors, and netted meat for winter use as well as hides, leather, bone and other essential material for clothing, tools and products for trade (Teit 1909:535-536). One Simpcw Elder recalls the trips "…from Yexyexéscen [now known as Mount Robson], Canoe/Kinbasket/McNaughton

Lake…hunting north side of Kinbasket Lake; elk, moose, deer in late fall" (Eustache 1999). Similarly, white sturgeon hunting was conducted, spring and summer, in the Study Area and required collaborative efforts to spear or line-hook and bring such large quarry to shore, process and smoke the meat, and transport it for consumption elsewhere (Simpcw 2011:52).

Table 2: Traditional Seasonal Round

Moon	Calendar Months	Key Species and Activities	Landscape Units[4]	Notes
First Moon – Pellc7ell7ullcwten "Entering month"	October-November	Elk hunting	River Terraces and Floodplains	Winter villages Story-telling
Second Moon – Pelltetéq'em "Cross-over month"	November-December	Deer hunting Trapping	River Terraces and Floodplains	Working skins
Third Moon – Pell7émtmin; Pellkw'ellemtmín "Stay at home month;" "stay underneath month"	December-January	Deer hunting Ice fishing for trout, whitefish	River Terraces and Floodplains	Working skins
Fourth Moon – Pelltsípwenten "Cache pit month"	January-February	Trapping and snaring Ice fishing Deer hunting	Montane Forests River Terraces and Floodplains	
Fifth Moon – Pellsqepts "Chinook wind month"	February-March	Deer hunting Digging for balsam root	River Terraces and Floodplains	Snow disappearing Low food stores
Sixth Moon – Pesll7éwten "Melting month"	March-April	Plant collection (early spring plants like chocolate lily) Sap collection Collection of spruce and cedar root, birch bark for	Intermediate Grasslands	Move from winter villages to family camps

[4] Landscape unit is an area of land classification based on common elements like animals or plants. It is one way in which Adams Lake and Neskonlith organize information about traditional Secwepemc cultural practices and a full description of the units is provided in their report (Adams Lake and Neskonlith 1999).

Moon	Calendar Months	Key Species and Activities	Landscape Units[4]	Notes
		baskets		
Seventh Moon – Pell7é7llqten "Root-digging month"	April-May	Trout fishing in lakes Deer hunting Plant collection (cow parsnip, fireweed) Indian potato harvested and stored	Alpine Intermediate Grasslands Intermediate Lakes	
Eighth Moon – Pelltspantsk "Mid-summer"	May-June	Berry collection	Montane Parkland Intermediate Lakes	Travel and trade
Ninth Moon – Pelltqwelqwéltemc "Getting-ripe month"	July	Salmon Trout Berry collection (eg. Blackcaps, gooseberries, squaw currant, soapberries, thimbleberries) Wild onion	Montane Parkland River Valleys	"The eastern people, on the Columbia [River] would have collected a good supply of blue camass for storage, as the men hunted along the familiar travel routes of elk and deer" (Shuswap Indian Band 2008:20).
Tenth Moon – Pesqelqlélten "Many salmon month"	August	Salmon Berries (Saskatoon, soapberries, blueberries, etc.)	Montane Parkland River Valleys	Along rivers
Eleventh Moon – Pelltemllikt "Spawned out month"	September	Hunting (elk, sheep, deer) Late season berries Mushrooms	Alpine Montane Parkland River Valleys	Back to mountains Monashees, Trinity Mountains (for example)

Moon	Calendar Months	Key Species and Activities	Landscape Units[4]	Notes
Balance of the Year – Pesllwélsten "Abandoning month"	October-November	Cranberries Soapberries Deer Marmots	Alpine Montane Parkland Montane Forests Intermediate Grasslands	Back to mountains

Note: The seasonal names provide both a reference to the sequence of the moons and a descriptive reference to the weather or other features of life at that time of the year. The table is from Shuswap Indian Band (2008) and Ignace (R. Ignace 2008:144-145). Additional elements are from Adams Lake and Neskonlith (1999).

Key Species

Many of the reports and documents prepared by Secwepemc peoples detail the importance and characteristics of key animal and plant species and this section draws on and replicates some components of those documents (e.g., Splatsin 2009; Adams Lake and Neskonlith 1999; Shuswap Indian Band 2008). Many reports acknowledge the importance of deer, elk, moose, fish of all kinds and berries to both the diet and the spirit. Here, information about a few species is provided.

Deer, Elk, Moose, Caribou

These upland animals were the primary game animals hunted for meat. Hunting deer, elk moose and caribou in the fall and early winter is preferred although the animals might be taken at other times of the year. It was inevitable that hunting accompanied fishing. One Splatsin Elder described her family going to Revelstoke when the salmon ran in the Columbia River. At those times, men typically hunted and the women prepared the smokehouses and tanned the hides. Moccasins, gloves and other kinds of clothing were made from the skins. Sometimes, children helped their mothers by scraping the hides. Caribou hunting is described in the oral history of all of Eastern Secwepemc communities. One Splatsin Elder describes having to wait 30 minutes for a herd of Caribou to pass in order to continue travelling through to the Arrow Lakes area. The mountain ranges west of Revelstoke were main caribou hunting areas as hunters could travel easily over land above the tree line (Williams n.d.).

As a further example, Rosemary Donald (Simpcw First Nation) remembers her grandmother, Annie Felix John, talking about the family traveling down the Columbia River to the lakes in the area and out to the Prairies to do trading and hunting. She was told there was a well-traveled trail north of Blue River to the Columbia Valley that her father, Chris Donald (1930s), her

grandfather Leo Dennis and Abel Saul used, via horseback. Chris Donald hunted in the Columbia Valley for moose, elk, deer and beaver. They would eat the beaver and trade the beaver fur for what they needed with First Nation people from the Prairies, as well as French trappers (Donald 2016).

Meat was dried on racks made from hazelnut wood. It could be dried in the air or with smoke. The smoke kept flies away from the meat. Women smoked meat with rotten wood, probably cottonwood, because wood with pitch or gasses would make the meat taste bitter. Green wood did not dry the meat very well. Typically, women and girls cut the deer meat in strips and looked after the fires. In addition, "According to Wells Gray Park employee, Charlie Shook, "During the fall caribou hunts these bands [Canim Lake and Chu Chua] often worked together as they hunted (Shook 1997)." and "Leo trapped and hunted as an Indian would. He followed the large herds of caribou and trapped and treed animals that may be following the caribou." (Shook 1997:61).

Simpcw hunted caribou with the "traditional use of large game hunts with chutes and wing traps….the use of bison products [by Simpcw] obtained through trade networks [from the Prairies via the Columbia River] not immediately available to other Secwepemc nations (Simpcw 2013)". Furthermore, "Historic descriptions of caribou fur lining the river banks at Clearwater from their crossings of the North Thompson River near Messiter", north of Avola, BC. The caribou traveled west from the Columbia River region. Their path was used as a trail to the east and the Plains in Alberta (Shook 1997, Simpcw 2015b).

Archival research of historic sites has identified a number of cabin sites, eighteen (18), in the vicinity of the LSA that may have been used for Aboriginal hunting activities in the past (approximately 1858, when there was a gold rush in the area). The historic cabins may be from the gold rush era but they could also be from historic aboriginal hunting activities in the region (Bussey 1978:22-25). Additional archival research should be conducted to clarify this potential evidence of Aboriginal hunting (see Smith-Burns 1977; and Bussey 1978, Appendix 1).

Berries

Berries (and other plant food) of all sorts are available throughout Secwepemc territory. Elders described collecting Saskatoons, huckleberries, blueberries, raspberries, black caps, choke cherries, Indian potatoes (skwnwinm), wild rice, strawberries, red currants and gooseberries (for a more complete list see Ernst 2002 and Ayotte 2010). Given the range of elevations available to berry collectors, ripe berries can be harvested at different times from late spring through early fall. Northeast of Mica Dam, people gathered berries and medicines and this, said one Elder, made the trip to the Mica area "worthwhile".

Berries are collected in ice cream pails or with birch bark baskets. Preserving berries by drying is a critical activity. One Elder described spreading berries on canvas boxes, set above the ground to allow for better drying. Children were required to turn the berries so that they dried on all

sides. Berries were also canned and frozen. Older Elders remember their parents describing traveling long distances to get berries during droughts.

Medicines

As a subset of collected plants, medicines represent a significant resource. In many cases, discussions of medicines – and where to get them – is kept private. However, Secwepemc people sometimes share this information in general form, particularly when medicine gathering areas might be impacted by development projects.

Medicines, and the process of collecting them, are closely related to matters of the spirit. Medicines, perhaps more so than any other collected food or material resource, reflect contemporary interests in cultural and spiritual identities as Indigenous people. The places where medicines are collected are shared in intimate teaching moments between parents and children. Community values are passed in these settings.

By way of example, one Splatsin Elder describes several different plant medicines collected in the upper Columbia River region and elsewhere in the territory. He mentioned:

- Indian tobacco noting that the Shuswap used to gather it … It was used to "chase your spirit out of your body so you wouldn't be scared, and could see what you had to see on the other plain." This tobacco was a mixture of kinnikinick, red willow bark and a small plant that grows on one of the creeks. That small plant, called y7ut in Secwepemctsín or Canby's Lovage in English, was collected in the Revelstoke area and traded with the Chinese who considered it a substitute for opium. The Shuswap got vegetables in return.
- Devil's Club is good for people with diabetes. It flushes the pancreas and kidneys and purifies the liver and blood.
- A Pasture sage bush is to cure sepsis poisoning.
- 'Frog Leaf' heals skin conditions.
- A plant referred to as 'silver leaf' was used for bronchitis and colds. It was a medicine used to boost the immune system and had silver leaves.
- Splatsin Elder describes the use of T'éqst'ye (Labrador Tea) saying "The dried leaves made a tea that could counteract Poison Ivy and also good for the heart and indigestion."

Fish

Fishing is, arguably, the most important food collecting activity of the Secwepemc people. In particular, the collection of salmon provided families with a significant amount of food throughout the year. By way of example, one Splatsin Elder said that her family needed two forty-five gallon barrels of salmon to have enough fish to last the winter. In her words, collecting that much fish was "a lot of work."

The North Thompson, Fraser, Shuswap and Columbia Rivers were important salmon fishing locations. The hoped-for return of salmon to the Upper Columbia continues to be of great importance to the Shuswap Band and Secwepemc Nation as a whole. Even smaller runs are important sources of subsistence, and additionally in maintaining identity as salmon fishing people (McIlwraith 2013:12-13). All the Secwepemc Bands rely on salmon to this day. Historical documents report this to be the case, even including bands whose traditional territory does not have a major run because of people's reliance on preserved fish (Alphonse 2002:12-13). Salmon runs are also important signifiers of territorial boundaries, even if other Bands had permission to access them (McIlwraith 2013:13, see also Ignace and Ignace 2004:384, Teit 1909 572-573).

A number of different techniques were used to catch salmon and other fish. Spears and harpoons, typically made by men in the spring, were common tools of the trade. In the rivers, weirs made out of hazelnut wood did not break as easily as weirs of other. Pitlamping was used traditionally as a way to catch fish. It was done by boat, often for sockeye. The light is put on the side of the boat on a calm night with not too much moonlight. Staying in shallow water, the fisher could then spear fish as they rose to the surface thinking the light was the moon. Another Elder remembered fishing with a pole as a child. She also remembered fishing at Hupel for salmon with spears.

Preparing oneself for fishing was important to fishing success and fishers cleansed themselves before salmon fishing. This cleansing included washing and/or burying clothes in order to get the human smell off of them. This had the additional effect of preventing grizzlies from being attracted to people while fishing. More than a practical matter, however, cleansing also prepares an individual to carry out activities that are central to one's Indigenous identity. Further, there is a very real sense here that as much as fishing is learned, it is also inherited. For this reason, the ability to fish in traditional locations, such as along the Columbia River is tied to family identity and status within the greater Splatsin community. Any further destruction of fishing areas with the development of the dam has the potential to impact family structures, the education of children and the social fabric of the entire community. One Splatsin Elder describes designated fisherman as skaotna (pronounced scout-na) "people of the river". Appointment of this position were based on skill and merit (Felix 2009).

Furthermore, these quotes illustrate the importance of fishing to Simpcw:

> *"There are 16 historic and prehistoric archaeological sites which have been recorded in the Kinbasket Lake/Canoe River region of the Robson Valley. Recorded prehistoric sites include: habitations with associated subsistence features such as cache pits, isolated cache pits, and surface and subsurface cultural materials including stone tools and stone waste flakes (Simpcw 2009). The Kinbasket migration did not prevent the Simpcw from continuing to live off the Study Area. Canoe River was once well known as an excellent salmon fishing spot. One Elder recounts "used to be clear and clean water*

and the salmon could come up and be eaten" (Simpcw 2009)." Fortier (2011:3).

"One Elder fished on the Upper Columbia about 40 years ago [circa 1971]. The fish that was caught was landlocked Salmon/Kokanee. In 1953 and 1963 the Elder fished in the Albreda River (both tributaries – South and North) and remembers the Kokanee being very plentiful in 1953. However, he noted there was a big decline of fish numbers since then. Another participant who had fished on the Upper Columbia River within the last ten years stated he fished for Kokanee and trout at least twice a year there. He notes that the fishing sites are worse now compared to 10 years ago.

The majority of participants did not think that allowing First Nation members to sell fish to non-First Nations was important or even an option to consider at all. Many expressed that fishing was not done for economic purposes, but to sustain their families. There was a variation of importance of fisheries options. Three participants thought that re-introducing salmon in the Upper Columbia River area was most important and one considered improving current fish stocks the most important option. Many of the participants suggested that all options (except selling fish to non-First Nations) were co-dependant therefore equally as important. Those who did not rate the options felt they did not know enough to make a decision or were concerned with the survival of the fish through the options listed.

The majority of survey participants thought that protecting threatened or endangered fish and their habitats was more important than improving current fish stocks for food and/or economic purposes. Many also noted that the two options go hand in hand, as all fish are important. One participant voiced that we cannot sacrifice one option for the other. There was one participant who thought improving current fish stocks for food and/or economic purposes was the more important option.

Participants felt that either more fish overrated bigger fish, or that improvement were to be made on both abundance and size. Not one participant valued bigger fish over the numbers of fish. However, concern with the decrease in the size of our fish, mentioning stories of how big and plentiful the fish used to be when they were growing up.

Three of the six participants did not think that Rainbow trout (10 lbs or bigger) was a good substitute for salmon in the short term. One participant mentioned that Rainbow trout did not have the taste or quality that salmon do, therefore would not be a viable option. Also, Rainbow trout did not store or preserve like a salmon and would have to be eaten right away. Two thought it was a partial substitute, and one thought it was a good short term substitute because the participant thought any option was a good option if our salmon were depleting." (Fortier (2011:4).

> *"Logging practices was a main concern with the people. The devastating effects of clear-cutting and bad management practices (such as current mining practices) are hurting the fish. Many were worried not only about the salmon and fish, but of the entire habitat. Other living things depend on the health of the ecosystem and it is our responsibility to ensure this. One voiced a concern with the pollutants in the water. Protection and enhancement of fish spawning grounds is a priority as well. A better awareness of traditional practices with the youth was also a concern. Another participant asked the question "what is the plan to address the issue of flooded reservoirs?". Rising mercury levels and changing oxygen levels are worrisome. Overfishing is also having devastating effects on the fish stocks." (Fortier 2011:4).*

> *"colossal disturbance created by logging in the area", current logging for pondage and other terraces and islands logged 10 to 30 years ago….pondage "will flood all islands and the majority of terraces as well as backing up many large creeks and rivers entering the Columbia along this eighty miles…." (Fortier 2011:5).*

> *"Logging practices was a main concern with the people. The devastating effects of clear-cutting and bad management practices (such as current mining practices) are hurting the fish." (Murton & Ferguson 1973:10).*

Many aspects of the traditional seasonal round of Eastern Secwepemc peoples continues to this day. The pattern of seasonal resource gathering, described above, including river fishing, upland hunting, and berry and plant gathering, as well as the cultural heritage significance of these activities, is maintained into the present, by community members. In the following discussion of Community-Specific Identified Uses of the Local Study Area (LSA), and Secwepemc Knowledge of the Mica Creek, Revelstoke, and Arrow Lakes Areas within the Upper Columbia River valley, previously documented Traditional Use data as well as historical connections to these places is presented.

Secwepemc Traditional Use and Knowledge of the Upper Columbia River Valley

Eastern Secwepemc peoples' history of use and knowledge of the Upper Columbia River valley is well documented (see Ignace and Ignace 2008; Kennedy and Bouchard 2005). The Upper Columbia River valley is an integral part of the Eastern Secwepemc seasonal round, a well-known travel corridor (Favrholdt 2009), and location of village sites (Shuswap Indian Band 2008). For example, **"**the frequent roving of the Indians who inhabit this upper parts of the North River [North Thompson River] to and from Jaspers House" (HBC 1852)…"These North River Natives hunted all the way up the North Thompson River and spent some of their time on the Columbia, where they were very close to the Rocky Mountains. There they would have also dug

for roots, such as the camas…some of the Jasper Natives came south, by the same route, to live in the Native village at North River [Chu Chua]" (Anderson 2015).

Within the Upper Columbia River valley, the Mica Creek, Revelstoke, and Arrow Lakes Areas, are especially significant and will be reviewed in detail in the next section, following the description of Community-Specific Identified Uses of the Local Study Area (LSA).

As documented through interviews with Elders and knowledgeable land users, and a review of ethnographic sources, Eastern Secwepemc peoples maintain a strong connection to the traditions and land-use practices of their ancestors. Spending time on the land, fishing, harvesting plants and animals, and participating in other cultural activities is crucial to culture and identity as Secwepemc people and caretakers of the land (Ignace and Ignace 2001). The following section presents the results from a number of different sources. The Community-Specific Identified Uses of the LSA details the results of a desktop review of previously documented Traditional Use data, organized by Traditional Use category. The following sections provide additional information on Secwepemc Knowledge of the Mica Creek, Revelstoke, and Arrow Lakes Areas, provided as part of a review led by Splatsin. Secwepemc place names within the LSA provided by Splatsin are presented in Appendix H.

Community-Specific Identified Uses of the Local Study Area (LSA)

This section identifies uses of the LSA by Adams Lake, Neskonlith, Little Shuswap Lake, Shuswap Band, and Splatsin. Following this is a detailed discussion provided by Simpcw regarding Simpcw's usage of the LSA and surrounding area.

A Traditional Use (TU) Value is defined as a specific place, resource, or interest reported by a Secwepemc member during a study, and is considered important to the ongoing practice of that community's land use. A site-specific TU Value is one that is reported as specific and spatially distinct and may be mapped (though locations may be considered confidential.) Site-specific TU Values, such as cabins, trails or hunting areas, reflect specific instances of use that anchor the wider practice of livelihood within a particular landscape. Table 3, below, details the nine (9) Traditional Use Value Categories, along with examples of the uses included in these categories, employed in this preliminary desktop review of results.

Table 3: Traditional Use Value Categories and Examples

Traditional Use Value Category	**Examples**
Cultural/Spiritual Sites and Place Name Values	includes cultural gathering places, burial sites, ceremonial areas, story places, teaching areas, medicinal and sacred plant gathering areas, Secwepemctsín place names, etc.
Future, Prospective, and Other Use Values	includes prospective hunting, fishing, habitation, commercial sites, etc.
Gathering and Processing Values	includes procurement of eggs, berries, food plants, drinking water sources, firewood, etc. and locations where specific tasks related to processing these resources took place
Habitation Values	includes cabins, camps, village sites, etc.
Hunting and Fishing Values	includes procurement of deer, moose, elk, other game, furbearers, fish, birds, etc. and locations where specific tasks related to processing these resources took place
Indigenous Landscape Values	includes boundary markers, orientation points, land based mnemonic values, etc.
Transportation Values	includes trails, water transport corridors, historical migration routes, etc.
Trapping/Commercial Values	includes trapping and commercial actives including trapping furbearers, pinecone picking, boxwood harvesting, commercial mushroom picking, etc.
Wildlife/Ecological Values	includes places of ecological importance such as fish spawning areas, nesting sites, mineral/salt licks, animal habitats, calving areas, etc.

It is important to note the limitations of the site-specific TU Value results presented below. As McIlwraith and Cormier (2015) point out, Indigenous relationships with the land are dynamic. In addition to considering the specific locations and activities Secwepemc land use what is also significant is "the broader context in which Indigenous peoples use, manage, and occupy their traditional lands" (2015:36). Moreover, the site-specific TU Values presented below should be understood as only limited representations of traditional use practices. Hunting, for instance, must be understood as integrated with Secwepemc "territorial use and control, the movements of people, and family relationships" (2015:39). The TU Values identified in the following section are more than sites on the land or isolated activities, but are connected to Secwepemc territorial integrity and cultural continuity (2015:50).

All six Secwepemc Bands have requested funding from BC Hydro to conduct Cultural Heritage Assessment (CHA) and/or Land Use and Occupancy Study (LUOS) research specific to the LSA. With this community-based research conducted in relation to the Revelstoke 6 Project, the narratives of community members would provide the context necessary to understand the currently available site-specific traditional use information.

The LSA, for the Revelstoke 6 Section C Desktop Review, was determined by combining three watersheds of the Upper Columbia River: Upper Arrow, Revelstoke Lake, Canoe Reach Columbia Reach[5]. This was chosen as it reflects a distance that the proposed BC Hydro Revelstoke Generating Station Unit 6 Project (the Project) is likely to have a direct impact on the Traditional Use of the Eastern Secwepemc. Using a combination of the three watersheds for the LSA encompasses potential effects on both the resources required for Secwepemc Traditional Use, and the area within which direct Project effects on TU Values may be experienced. For example, if community members can see, smell or hear an industrial development from the location of a TU Value this will often degrade or destroy the value of the site. Quiet is important for both spiritual sites and hunting sites. Industry-related noise may make a spiritual site unusable and noise from industry can deter wildlife from a hunting area making it useless. It also follows from these examples that a campsite that is utilized because of its proximity to a spiritual site or hunting site would also be rendered useless if the associated spiritual or hunting sites are rendered unusable. While these are only hypothetical scenarios they illustrate how Project effects have the potential to directly affect TU Values kilometres from a project footprint.

Preliminary Overview of Desktop Review Results

As has been identified in previous studies (e.g. Simpcw FN 2009:3, section 2.16), without a project-specific study that explicitly considers the Revelstoke 6 Project, results are incomplete when doing a desktop review. Due to the limitations of doing a desktop review, Secwepemc connections to the LSA are incompletely recorded. All six Secwepemc Bands have requested funding from BC Hydro to conduct CHA and/or LUOS research specific to the LSA.

As this CHA and/or LUOS has not been completed to-date, with interviews focused primarily on mapping TU Values within the LSA, the only results available for this Desktop Review are those from previous studies. These previous studies referred to, were available for review in the Adams Lake, Neskonlith, Little Shuswap Lake, Shuswap Band, and Splatsin Community Knowledge Keeper (CKK)[6] databases as of September 2nd, 2016. This includes TU Values mapped during other Traditional Use or Cultural Heritage studies, such as the Adams Lake Traditional Use Study (2013-2014), Adams Lake and Neskonlith Indian Band Traditional Use Study Project (1998), Chase Creek Road to Chase West and Jade Mountain Cultural Heritage Assessment (currently underway), Little Shuswap Lake Indian Band Traditional Use Study (2000), Shuswap Indian Band Traditional Use Study (2008), DMCS and McIlwraith (2014), and McIlwraith (2013).

It should be noted that none of these studies were targeted at the LSA, and most were focused on areas west of the LSA. The literature available on four of these five databases is listed in appendices A, B, C, and D. Splatsin's literature was examined for possible review from reports available through the band office, see Appendix E. The differences between the number of documents available within the databases reflects how recently individual bands acquired their

[5] This data was obtained from the British Columbia Government-maintained fish habitat data (British Columbia 2016).

[6] The Community KnowledgeKeeper (CKK) software package is mapping, data management, and integrated consultation tracking and response system used by 26 First Nation and Métis communities in Canada to manage the diverse records created through research and consultation processes.

databases, and human resources available to scan documents and upload them to this digital archive within each band.

There were approximately 12,831[7] site-specific previously mapped TU Values reviewed for this Desktop Review. In the Summary of Site-Specific Traditional Use Values section below, preliminary results from the Desktop Review of previous TU data intersecting the LSA are presented, by TU Value category.

Summary of Site-Specific Traditional Use Values

Site-specific TU Values recorded within the LSA are described in general terms below, according to the nine Traditional Use Value categories. Although the number of TU Values mapped in each category is presented below, these numbers under-represent mapped TU Values, because areas mapped as polygons tend to represent multiple uses by groups of community members over decades. Also, a single spiritual site may be considered in greater need of protection than multiple mapped sites from another category.

The numbers of TU Values in each category below are derived from a Desktop Review of the TU data from previous studies stored in the Adams Lake, Neskonlith, Little Shuswap Lake, Shuswap Band, and Splatsin's CKK databases are presented as qualitative data for descriptive purposes only. The limitations of this previous data must be noted. Some of legacy data are low in details and low in accuracy due to the limitation of certain paper mapping methods, which was the standard in earlier Traditional Use research. Furthermore, many of the TU Values listed below lack associated interviews audio, transcripts, or interview metadata and, as a result, it is challenging to determine accurate site descriptions, or details such as species, timeframe, and season. As a result of these limitations, a project-specific Secwepemc CHA and or LUOS for the LSA is required as it will provide the detailed baseline needed to accurately assess the impacts of the proposed Project on Secwepemc Cultural Heritage, as well as assist in developing potential mitigation measures. All six Secwepemc Bands have requested funding from BC Hydro to conduct a CHA and/or LUOS for the LSA. Furthermore, Simpcw First Nation specifically requests a LUOS be conducted, in order to establish a cultural heritage baseline to accurately assess Project effects.

Site-Specific Cultural/Spiritual Sites and Place Names

Site-specific Cultural/ Spiritual Sites and Place Names Values, including burial sites, ceremonial areas, and gathering places, as well as locations with Secwepemctsín place names, stored in the Adams Lake, Neskonlith, Little Shuswap Lake, Splatsin, and Shuswap Bands' CKKs intersecting the LSA were reviewed. Results of this review are as follows:

Through the review of previous Adams Lake TU data stored in their CKK, there were three (3) site-specific Cultural/Spiritual and Place Name Values reported within the LSA. Sites

[7] This is the combined number of TU Values stored in the Adams Lake, Neskonlith, and Little Shuswap Lake Band CKKs. The estimated number of Splatsin TU Values reviewed was determined by estimating the TU Values represented by site cards saved in the Splatsin Access Database.

intersecting the LSA include, community gathering areas (including seasonal hunting camps), and sacred areas.

Through the review of previous Neskonlith TU data stored in their CKK, there were five (5) site-specific Cultural/Spiritual and Place Name Values reported within the LSA. These sites include health sites, places community members have gone for healing and physical health, like hot springs, as well as medicinal plant gathering areas.

Through the review of previous Splatsin TU data stored in their CKK, there were fifteen (15) site-specific Cultural/Spiritual and Place Name Values reported within the LSA. These sites include burial sites, medicinal plant gathering areas, a spiritual training area, Traditional Story areas, spiritual training sites, health sites, named places, and pit houses (*c* , ʔ*istkten*uli in Chinook jargon).

Through the review of previous Shuswap Band TU data stored in their CKK, there were seven (7) site-specific Cultural/Spiritual and Place Name Values reported within the LSA. Sites intersecting the LSA include a burial site and medicinal plant gathering areas.

The review of previous data stored within the Adams Lake, Neskonlith, Little Shuswap Lake, Splatsin, and Shuswap Bands' CKKs has documented thirty (30) site-specific Cultural/Spiritual and Place Name Values reported within the LSA.

This data was recorded in studies that were not specific to the LSA, and it is anticipated that a substantial number of additional TU Values will be recorded in the requested Secwepemc CHA and/or LUOS research, specific to the LSA, which all six Secwepemc Bands have requested funding for from BC Hydro to conduct.

Site-Specific Future, Prospective, and Other Use

Site-specific Future, Prospective, and Other Use Values, including prospective hunting, fishing, habitation, commercial sites, and other uses such as recreation, stored in the Adams Lake, Neskonlith, Little Shuswap Lake, Splatsin, and Shuswap Bands' CKKs intersecting the LSA were reviewed. Results of this review are as follows:

Through the review of previous Splatsin TU data stored in their CKK, there were seven (7) site-specific Future, Prospective, and Other Use Values reported within the LSA. These sites recreation sites such as rock climbing, and log rolling sites.

The review of previous data stored within the Adams Lake, Neskonlith, Little Shuswap Lake, Splatsin, and Shuswap Bands' CKKs has documented seven (7) site-specific Future, Prospective, and Other Use Values reported within the LSA.

This data was recorded in studies that were not specific to the LSA. A substantial number of additional TU Values would be recorded in the Secwepemc CHA and/or LUOS for the LSA which all six Secwepemc Bands have requested that BC Hydro fund.

Site-Specific Gathering and Processing Values

Site-specific Gathering and Processing Values, including areas where foods, plants, or animal resources are gathered or processed, including food plant gathering, berry gathering, firewood harvesting, plant drying, berry drying, etc. stored in the Adams Lake, Neskonlith, Little Shuswap Lake, Splatsin, and Shuswap Bands' CKKs intersecting the LSA were reviewed. Results of this review are as follows:

Through the review of previous Adams Lake TU data stored in their CKK, there were eighteen (18) site-specific Gathering and Processing Values reported within the LSA. Site-specific Gathering and Processing Values intersecting the LSA include picking berries (e.g. huckleberries, blueberries, soapberries), and logging.

Through the review of previous Neskonlith TU data stored in their CKK, there were sixty-seven (67) site-specific Gathering and Processing Values reported within the LSA. Sites intersecting the LSA. Site-specific Gathering and Processing Values intersecting the LSA include picking berries, food plants, and specialty plants.

Through the review of previous Splatsin TU data stored in their CKK, there were thirty-eight (38) site-specific Gathering and Processing Values reported within the LSA. Site-specific Gathering and Processing Values intersecting the LSA include picking berries (e.g. huckleberries, blueberries, soapberries, rosehips, gooseberries), and mushroom gathering, food preservation areas, and birch bark and cedar root collecting areas.

Through the review of previous Shuswap Band TU data stored in their CKK, there were eight (8) site-specific Gathering and Processing Values reported within the LSA. Site-specific Gathering and Processing Values intersecting the LSA include picking berries (e.g. red huckleberries, black huckleberries), picking food plants (e.g. fiddleheads), and mushroom gathering (e.g. morels).

Through the review of previous Little Shuswap Lake TU data stored in their CKK, there were three (3) site-specific Gathering and Processing Values reported within the LSA. Site-specific Gathering and Processing Values intersecting the LSA include berry picking sites.

The review of previous data stored within the Adams Lake, Neskonlith, Little Shuswap Lake, Splatsin, and Shuswap Bands' CKKs has documented one hundred and thirty-four (134) site-specific Gathering and Processing Values reported within the LSA. This data was recorded in studies that were not specific to the LSA, and it is anticipated that a substantial number of additional TU Values would be recorded in the Secwepemc CHA and/or LUOS for the LSA which all six Secwepemc Bands have requested that BC Hydro fund.

Site-Specific Habitation Values

Site-specific Habitation Values, including locations of homes, cabins, camps, etc., stored in the Adams Lake, Neskonlith, Little Shuswap Lake, Splatsin, and Shuswap Bands' CKKs intersecting the LSA were reviewed. Results of this review are as follows:

Through the review of previous Adams Lake TU data stored in their CKK, there were two (2) site-specific Habitation Values reported within the LSA. Sites intersecting the LSA include cabins (which in this case were also used as teaching places).

Through the review of previous Neskonlith TU data stored in their CKK, there were five (5) site-specific Habitation Values reported within the LSA. Sites intersecting the LSA include cabins, homes, and campsites.

Through the review of previous Splatsin TU data stored in their CKK, there were twenty-nine (29) site-specific Habitation Values reported within the LSA. Sites intersecting the LSA include overnight campsites.

Through the review of previous Shuswap Band TU data stored in their CKK, there were two (2) site-specific Habitation Values reported within the LSA. These are camping areas.

The review of previous data stored within the Adams Lake, Neskonlith, Little Shuswap Lake, Splatsin, and Shuswap Bands' CKKs has documented thirty-eight (38) site-specific Habitation Values reported within the LSA. This data was recorded in studies that were not specific to the LSA, and it is anticipated that a substantial number of additional TU Values would be recorded in the Secwepemc CHA and/or LUOS for the LSA which all six Secwepemc Bands have requested that BC Hydro fund.

Site-Specific Hunting and Fishing

Site-specific Hunting and Fishing Values stored in the Adams Lake, Neskonlith, Little Shuswap Lake, Splatsin, and Shuswap Bands' CKKs intersecting the LSA were reviewed. Most of the hunting and fishing areas mapped as polygons represent decades of an individual or group subsistence activity carried out in a resource-rich area. Results of this review are as follows:

Through the review of previous Adams Lake TU data stored in their CKK, there were nine (9) site-specific Hunting and Fishing Values reported within the LSA. Site-specific Hunting and Fishing Values intersecting the LSA include trout fishing, moose and deer hunting.

Through the review of previous Neskonlith TU data stored in their CKK, there was one (1) site-specific Hunting and Fishing Value reported within the LSA. This is an elk hunting area.

Through the review of previous Splatsin TU data stored in their CKK, there were seventy-two (72) site-specific Hunting and Fishing Values reported within the LSA. Site-specific Hunting and Fishing Values intersecting the LSA include kickinee (kokanee), sturgeon, trout, Dolly Varden, carp, whitefish, and salmon fishing, goat, caribou, deer, bighorn sheep, and elk hunting, as well as fish drying and meat drying areas.

Through the review of previous Shuswap Band TU data stored in their CKK, there were two (2) site-specific Hunting and Fishing Values reported within the LSA. Site-specific Hunting and Fishing Values intersecting the LSA include Kokanee and ling cod fishing areas.

The review of previous data stored within the Adams Lake, Neskonlith, Little Shuswap Lake, Splatsin, and Shuswap Bands' CKKs has documented eighty-five (85) site-specific Hunting and Fishing Values reported within the LSA. This data was recorded in studies that were not specific to the LSA, and it is anticipated that a substantial number of additional TU Values would be recorded in the Secwepemc CHA and/or LUOS for the LSA which all six Secwepemc Bands have requested that BC Hydro fund.

Site-Specific Transportation Values

Site-specific Transportation Values, including locations of roads, water transportation routes, trails, old wagon roads, footpaths, etc., stored in the Adams Lake, Neskonlith, Little Shuswap Lake, Splatsin, and Shuswap Bands' CKKs intersecting the LSA were reviewed. Results of this review are as follows:

Through the review of previous Adams Lake TU data stored in their CKK, there were six (6) site-specific Transportation Values reported within the LSA. These sites include historic trails (i.e. horse trails), currently used trails and access routes.

Through the review of previous Splatsin TU data stored in their CKK, there were eight (8) site-specific Transportation Values reported within the LSA. These sites include historic trails (i.e. horse trails), currently used trails and travel routes

Through the review of previous Shuswap Band TU data stored in their CKK, there seven (7) site-specific Transportation Values reported within the LSA. These sites include historic trails and currently used trails, such as snowmobile routes, and access routes.

Through the review of previous Little Shuswap Lake TU data stored in their CKK, there was one (1) site-specific Transportation Values reported within the LSA. This site is an historic trail.

The review of previous data stored within the Adams Lake, Neskonlith, Little Shuswap Lake, Splatsin, and Shuswap Bands' CKKs has documented twenty-two (22) site-specific Transportation Values reported within the LSA. This data was recorded in studies that were not specific to the LSA, and it is anticipated that a substantial number of additional TU Values would be recorded in the Secwepemc CHA and/or LUOS for the LSA which all six Secwepemc Bands have requested that BC Hydro fund.

Site-Specific Trapping/Commercial

Site-specific Trapping and Commercial Values, including areas used to trap or conduct commercial activities such as commercial mushroom or boxwood picking, etc., stored in the Adams Lake, Neskonlith, Little Shuswap Lake, Splatsin, and Shuswap Bands' CKKs intersecting the LSA were reviewed. Results of this review are as follows:

Through the review of previous Adams Lake TU data stored in their CKK, there was one (1) site-specific Trapping and Commercial Values associated with trapping described in the LSA.

Through the review of previous Splatsin TU data stored in their CKK, there were ten (10) site-specific Trapping and Commercial Values associated with trapping marten and other commercial activities described in the LSA.

Through the review of previous Shuswap Band TU data stored in their CKK, there was one (1) site-specific Trapping and Commercial Values associated with trapping described in the LSA.

The review of previous data stored within the Adams Lake, Neskonlith, Little Shuswap Lake, Splatsin, and Shuswap Bands' CKKs has documented twelve (12) site-specific Trapping and Commercial Values reported within the LSA. This data was recorded in studies that were not specific to the LSA, and it is anticipated that a substantial number of additional TU Values would be recorded in the Secwepemc CHA and/or LUOS for the LSA which all six Secwepemc Bands have requested that BC Hydro fund.

Site-Specific Wildlife/Ecological Values

Site-specific Wildlife/Ecological Values, including locations of fish spawning areas, animal habitat, nesting sites, mineral licks, etc., stored in the Adams Lake, Neskonlith, Little Shuswap Lake, Splatsin, and Shuswap Bands' CKKs intersecting the LSA were reviewed. Results of this review are as follows:

Through the review of previous Shuswap Band TU data stored in their CKK, there was one (1) site-specific Wildlife/Ecological Values associated with past and present land use activities described in the LSA. This Site-Specific Wildlife/Ecological Values is a salt lick.

The review of previous data stored within the Adams Lake, Neskonlith, Little Shuswap Lake, Splatsin, and Shuswap Bands' CKKs has documented one (1) site-specific Wildlife/Ecological Value reported within the LSA. This data was recorded in studies that were not specific to the LSA, and it is anticipated that a substantial number of additional TU Values would be recorded in the Secwepemc CHA and/or LUOS for the LSA which all six Secwepemc Bands have requested that BC Hydro fund.

Summary of Site-Specific Traditional Use Values

The Desktop Review of previous data stored within the Adams Lake, Neskonlith, Little Shuswap Lake, Splatsin, and Shuswap Bands' CKKs has documented one hundred and forty-nine (149) Traditional Use Values from eight of the nine TU Value categories within the LSA. Each TU Value category is part of the interrelated practices of Secwepemc Traditional Land Use and Cultural Heritage. For Adams Lake, Neskonlith, Little Shuswap Lake, Splatsin, Shuswap, and Simpcw members to gather resources from the land (Gathering and Processing Values and Hunting and Fishing Values, knowledge of the land through names and stories (Cultural/Spiritual and Place Name Values) is required, as is the ability to be able to access the land (Transportation Values), and be able to spend the night on the land (Habitation Values).

While this Desktop Review demonstrates that the LSA has been, and continues to be, used by the Secwepemc peoples for practicing TU activities and necessary for the ongoing practice of

Secwepemc Rights, it also points to the need for a Project-specific CHA and/or LUOS. Only through a project-specific Secwepemc CHA and/or LUOS for the LSA, which all six Secwepemc Bands have requested that BC Hydro fund, involving research, interviews, and ground-truthing, focused primarily on Secwepemc TU within the LSA will it be possible for a Cultural Heritage baseline to be established and an assessment of anticipated impacts resulting from the proposed project to be provided.

Simpcw First Nation: overview of Simpcwemc use of the LSA and Surrounds

Note from Simpcw First Nation*: the following paragraphs are offered here not as definitive evidence per se but as a general discussion of Simpcwemc lands, waters and resource use and knowledge thereof, travel and relations with other groups, within and incorporating the Study Area; as such, while references to corroborating sources are made in the text, not all available sources are utilized herein.*

Prior to the construction of hydroelectric dams and the subsequent flooding of lands, under what is now called the Revelstoke Lake Reservoir, the south-bearing Columbia River trench provided not only an ancient thoroughfare for Simpcwemc travelling north and south, between places within Simpcwul'ecw and to the homelands of neighbouring peoples with whom they conducted commerce, but the corridor also hosted a diversity of ecologies and harvest species, upon which Simpcwemc have relied for millennia. Simpcw oral histories, genealogical records, early written records from fur trade era journals, colonial period ethnographies, combine to illustrate and confirm Simpcwemc use and occupation of the Study Area.

Prior to direct contact with Europeans (1790's), the south Columbia trench provided Simpcwemc with access to reliable Mountain caribou, Big Horn sheep and Mountain goat populations at higher elevations both in the Shuswap Highlands/Adams Plateau, and into the Selkirk Range above Mica Creek and Big Bend. Other species harvested in the corridors and plateaus associated with the Study Area include bear and marmot, and elk and deer[8] migrated throughout the east and southern lower elevations, in addition to grouse and ptarmigan; waterfowl and salmon, trout, whitefish and sturgeon inhabited the Columbia waters and tributaries[9].
Plant harvest was a ubiquitous function of moving across the land seasonally for Simpcwemc, and all travel routes considered the predictability, abundance and distribution of nutrients, tool source and medicinal plants, at all harvest elevations.

Simpcwemc, are considered to be a highly mobile Secwepemc Band, and are characterized by the use of both riverine and higher elevation lacustrine (lakes) habitation types[10], with

[8] Retrieved from: DodiePLACENAMES-Draft.docx; paraphrased from interview transcripts, from "Yexyexéscen [now known as Mount Robson], Canoe/Kinbasket/McNaughton Lake…hunting north side of Kinbasket Lake; elk, moose, deer in late fall".

[9] Moose were not a prevalent harvesting species in Simpcwul'ecw until after the turn of the 20th century, but were hunted readily as their numbers increased, in the wake of logging and large burns experienced in the late 1800's, early 1900's.

[10] Alexander, Diane. *A Cultural Heritage Overview of the Cariboo Forest Region.* Prepared for Cariboo Forest Region, Ministry of Forests, Williams Lake, BC. 1997.

occupation locations often reflecting patterns in harvest species fluctuation, trade and commerce opportunity, and the strict adherence to systematic land and resources stewardship and intergroup sharing protocols[11]. Trapping areas, for instance, were carefully monitored and maintained through hereditary descent, and rarely if ever trapped out of ecological balance[12].

Habitation types associated with trapping tended to be temporary, although strategic camps may have been revisited annually, as were caribou hunting base -camps and lower-elevation processing sites. These encampments would have been constructed to house family or clan groups working collaboratively together to conduct highly organized hunts, and would have consisted of conical or rectangular bark and pole lodges, above ground, with smoking pits and drying racks, as well as cache and cooking pits. There may also have been surficially evident sites that illustrated the collaborative and labour-intensive harvest of large and small sturgeon (even a sub-adult sturgeon can require more than one adult human to reel it to land).

While large-run salmon fisheries were seasonally important to Simpcwemc, and required residency at main-river fishing grounds for the spring and fall harvest seasons, the use of *c* (classic *ʔstkten* semi-subterranean circular winter homes) appears to have been regionally preferential, and dependent on elevation of wintering villages[13], whereas cache pits and above-ground caches were consistently constructed where ever harvest areas provided such volume. The primary Simpcwemc cultural activities on the lands and waterways now submerged beneath the Study Area, therefore, along with the Area's geological characteristics[14] may well have left some diversity of site type within the archaeological record, with respect to the habitation near to, and the function of certain places. Archaeological work in the Study Area has been sporadic and hampered by research design, untenable time frames, funding limitations and construction disturbance[15]; much of what could have been systematically investigated under less problematic

[11] In 1903, James A. Teit, early ethnographer, recorded Simpcwemc oral histories provided by Elders regarding the general Simpcwemc seasonal rounds, with its regional similarities and differences from other Secwepemc, and specifically regarding territory, land use and stewardship of resources. While Teit was unable to attend many of the population hubs within Simpcwul'ecw, he was aware that Simpcwemc continued to use the Canoe-Columbia corridor as a primary thoroughfare at the time of his field research. His recording work was not published until 1909; *see* Teit, James A. *The Shuswap*. Memoir of the American Museum of Natural History, Jesup North Pacific Expedition. 2 (7):443-758. 1909a. Reprinted by AMS Press, New York

[12] This state of balance, however was dramatically altered with the advent of post-contact Canadian fur trade activity in the Columbia/Canoe corridors, primarily by independent freemen fur hunters and steel-trappers, between 1800 and 1840's. It was the policy of these imported harvesters to extirpate whole colonies of fur-bearing species in pursuit of control of the trade between local peoples and trading posts. In addition, meat-hunters were similarly employed to supply posts and expeditions to the extent that entire watersheds could be denuded of ungulates within a hunting season. Following the slow recovery of some species, these populations and the habitats they relied upon were once again largely extirpated with the flooding by hydroelectric dam systems, both in the Canoe corridor and in the Study Area.

[13] *Ibid:* Alexander, Diane. *A Cultural Heritage Overview of the Cariboo Forest Region.* Prepared for Cariboo Forest Region, Ministry of Forests, Williams Lake, BC. 1997.

[14] The geology of the Study Area is characterised in some places by steep inclined canyon walls and backswept, forested slopes, which, prior to inundation, supported lower terraces and jetties that provided access to harvestable species in the Mica and Columbia confluence area.

[15] See Choquette, Wayne. *Archaeological Overview Assessment: Monitoring Program No. CLBMON-51; Kinbasket and Revelstoke Reservoirs.* Prepared for BC Hydro, 2008.

circumstances, is now subject to underwater archaeological methods and the attendant logistical and financial challenges.

Simpcwemc also travelled extensively outside of the boundaries of Simpcwul'ecw on annual trade and collaborative harvest missions, both with other Secwepemc, and with groups to the south (K'tunaxa, Sinixt), and on the eastern slopes and foothills (Nakoda). Certainly Simpcw's long-standing trade relations with other ethnic Secwepemc, and especially with outside cultural-linguistic groups, required them to be resourceful, reliable and self-sufficient, linguistically capable and highly mobile. While Simpcwemc probably maintained more consistent respect from other groups through their willingness to negotiate, or to create mutually beneficial alliances through political pact or marriage-based agreement, Simpcw oral history is clear in its recounting of occasions where Simpcwul'ecw was defended in the face of interloping (Sekani, ca. 1790's), thieving (mix-blood freemen, ca. 1860's), or invading (Tsilhqot'in, ca. 1873) forces; often in collaboration with other Secwepemc groups, Simpcwemc so managed to maintain the boundaries of the territory. All accounts suggest that, as opposed to "warring" synonymous with other groups, Simpcwemc preferred to swiftly and expediently dispatch the offending parties and restore peace.

In summary, the Study Area has long been utilized by Simpcwemc, positioned as it is in the southern-most quarter of Simpcwul'ecw, and its importance as a travel corridor and harvest resource area is borne out in the many sources of written and remembered information. Simpcw First Nation is currently undertaking to amass and systematically organize this volume of data, including detailed lists of harvested species, distribution, seasonal rounds, and further archival, genealogical and oral historical records.

Secwepemc Knowledge of the Mica Creek Area

The Mica Dam was built in 1973. It was slated for expansion in the early 2000s and in 2009 some traditional use research was conducted into Secwepemc uses of that area (Splatsin 2009; Elias 2009). Elias worked with Elders from Adams Lake and Neskonlith on their project and Elias largely determined that memories of the Mica area were fading (Elias 2009:12; 23). That work did record a number of extensive statements of use and memory related to the Columbia River between Revelstoke and Mica, leading Elias to conclude:

> *[There] is enough of a record to indicate a continuous tradition of use of the Project Area for at least the past several centuries and, perhaps, for the past several millennia. Just as important, as [an Adams Lake Elder] points out, the knowledge of the periphery is far from extinct and neither are the skills needed to make use of lands and resources in the Project Area (Elias 2009:23-24).*

Similar work was conducted in Splatsin (Splatsin 2009). From that work, Elders also remembered a history in the Mica Dam area. They spoke, for example about hunting and fishing in the area that is now flooded. One Elder said they used to go to the Canoe River at Mica but now it is blocked off. Trout, kokanee and Dolly Varden fishing in the Columbia River south of the Mica Dam.

The Mica area is significant to the Splatsin people for a variety of reasons. Specifically, the region contains habitation sites, food harvesting sites on land and water, plant and berry collecting, burial sites, ceremonial sites, trails and pre-flood activity areas (Splatsin 2009:16).

Secwepemc Knowledge of the Revelstoke Area

The Sexqéltkemc Bands (Adams Lake, Neskonlith, Splatsin) in collaboration with the Shuswap Indian Band, have conducted several traditional use studies in the area around Revelstoke (Splatsin 2008; 2009; DMCS 2011; 2012; 2014). Those studies have concluded a significant Secwepemc presence in the Columbia River valley and the Upper Arrow Lakes.

In addition, Neskonlith and Adams Lake conducted a TUS and produced a report (1999) which focused on the intersections of culture and landscape within the Territory (including the Revelstoke and Arrow Lakes regions). This report also includes information about the history of the Secwepemc during the days of European contact, in addition to past and contemporary traditional land-uses.

Little Shuswap Lake has also conducted their own TUS which includes the Revelstoke area of this Section C's LSA (Ernst and Artz 2000). This study examined traditional land-use and included ground-truthing and TUS camping expeditions to better trigger people's memories of areas and uses (Ernst and Artz 2000:18).

Shuswap Band conducted a TUS, and archival review (Fish Creek Consulting 2007) which includes TU sites within the Section C LSA. This study documented sites by a Traditional Use Committee and focused on "…kekulis, burial sites, pictographs, spiritual sites, cultural sites, traplines and trails, and resource use sites (primarily fish and medicines)." (Fish Creek Consulting 2007:21). In 2008 another TUS study was conducted by Shuswap.

The Revelstoke area is used routinely for camping, plant collection, fishing, and hunting. It was a significant place within the Splatsin seasonal round of movements for food. And, it was a place at which Secwepemc peoples met other Indigenous peoples. The following section is taken from DMCS (2014).

In addition, historical, community-based research conducted by Splatsin researchers in the late 1990s documented Splatsin boundaries as much further east than Revelstoke. This eastern boundary is associated with Splatsin genealogical and historical connections to the Shuswap Band. Trails linking Splatsin people to the Shuswap Band's core territory on the eastern side of the Selkirk Mountains likely passed through the Monashees to the Nakusp-Needles area and through the Selkirks at Rogers Pass (Splatsin Needles Research 1999; 2000). This type of research highlights the need for more specific research. All six Secwepemc Bands have requested funding from BC Hydro for a Secwepemc CHA and/or LUOS of the LSA. The interviews mentioned here, regarding Splatsin genealogy and territory, would be reviewed during a CHA and/or LUOS with the current research questions in mind.

Simpcw First Nation has been conducting scholarly research of its ethno-cultural, historical environmental, and archaeological information, and inherited knowledge, since the late 1970's, beginning with cultural overviews and sub-regional studies, audio and video interview and transcription, collection of story and place knowledge, GIS mapping throughout the era of the BC Forestry TUS program, and into the contemporary research theatre with Land Use and Occupation Studies, and Land Use, Resources and Ecological Knowledge templates, and has, as a result, gathered and synthesised a great deal of verifiable documentation. Simpcw has developed an extensive library of pre-1846 post-contact period archival material, mapping, oral history, relevant literature and ethnographic information that provides its cutting-edge GIS department with specific emphasis on the Study Area, and the many interdependent places and phenomena that surround it. Simpcw also makes a concerted effort to stay current with the outcomes of, and impacts resulting from land-mark court cases that shape indigenous research. All primary and secondary source information is critically analysed and considered in its various contexts

The Shuswap Band has also conducted TUS interviews which included information relating to the Revelstoke area. Horse trails used during the Shuswap Band's seasonal round included mountain routes, which passed through Revelstoke (Shuswap Indian Band 2008:26). For the Shuswap, the flooding of the area, for the construction of the Revelstoke Dam, caused negative impacts e.g. the change from river habitat to reservoir habitat reduced the potential spawning populations for numerous species, particularly whitefish and trout (Shuswap Indian Band 2008:79). Thus, negative effects of the dam included the reduction of land the Shuswap used for hunting, fishing, and trapping. These important cultural places were further impacted as archaeological sites (e.g. burials and village sites) were also affected (Shuswap Indian Band 2008:79).

Anthropologists and historians have worked in the Columbia system, and regionally around Revelstoke, for years. Work by Bouchard and Kennedy is noteworthy because it speaks directly to aboriginal uses of the Columbia River Valley near Revelstoke (see Bouchard and Kennedy 1986; 2005; Kennedy and Bouchard 1998; Arcas Associates 1986). Bouchard and Kennedy's work emphasizes the aboriginal presence in the area, recounts the observations of railway surveyors who interacted with Indigenous people near Revelstoke at Big Eddy, and concludes that the Columbia River Valley was a tremendously busy place for food collection, habitation, and political interactions including fighting (Bouchard and Kennedy 2005:70).

Bouchard, Kennedy, and Stephen Lawhead, all working for Arcas in the mid-1980s, comment on Indigenous uses of the Illecillewaet Valley, within the Section C LSA, in relation to the proposed widening of Highway 1 between Sicamous and Revelstoke. Working with Splatsin Elders, among others, Bouchard, Kennedy, and Lawhead compiled place name and use information for that stretch of highway. The Illecillewaet River Valley was included in their results. Citing Boas and Moberly, Bouchard and Kennedy assert that there is "no conclusive evidence for Indian utilization of the area around the mouth of the Illecillewaet, or for the Illecillewaet River itself" (Bouchard and Kennedy 1986:82). They complain that "present-day [i.e. 1986] Native people

appear to have only a fragmentary knowledge of the traditional utilization of [the Illecillewaet] area" (Bouchard and Kennedy 1986:83). The Bouchard and Kennedy research results lack information that researchers working with the Secwepemc expect is available from living Elders (McIlwraith pers. comm. June 30, 2016). All six Secwepemc Bands have requested funding from BC Hydro to conduct CHA and/or LUOS research specific to the LSA. Project-specific interviews, conducted as a part of the requested CHA and/or LUOS, will provide the opportunity to elicit this TU information from living Elders.

Despite the limited results of Bouchard and Kennedy's research, Stephen Lawhead's research with a Splatsin Elder is noteworthy. The Splatsin Elder provided Lawhead with a place name for Revelstoke. It is sts'ek'kin, meaning 'connected' and referring to Revelstoke as a place at which Secwepemc and Sinixt people came together (Bouchard and Kennedy 1986:90; Lawhead 1986:95). In addition to that, another Splatsin elder provided a name for the surrounding environs - Stilthn meaning, "Mountain peaks" (Cormier 2015).

Furthermore, in their 2005 study of the Columbia River, Bouchard and Kennedy elaborate on their earlier consideration of the evidence for Aboriginal uses of the Illecillewaet Valley. They note the recording of an Okanagan-Colville name for the Illecillewaet River (Bouchard and Kennedy 2005:73). And, they assume the presence of a trail along the Illecillewaet River based on information from a historian and Walter Moberly: "Only a limited amount of information has been recorded about the Native use of the Illecillewaet area. According to local historian Kate Johnson, "pony trails of the Indians" led from Revelstoke "on to the Rogers Pass country" (presumably alongside the Illecillewaet; Bouchard and Kennedy 2005:73). Bouchard and Kennedy continue, addressing specifically Lakes (Sinixt) use of the Illecillewaet Valley:

> *We have found no additional evidence that the Lakes people regularly went up the Illecillewaet River -- this is not to say they did not utilize this area, it is just that we are aware of no records of their having done so, above and beyond the Johnson [local historian] and [Walter] Moberly references. Nor are we aware of a Lakes settlement around the mouth of the Illecillewaet where Revelstoke is now located. As discussed above, the available documentation suggests that their settlement was on the opposite side of the Columbia River from Revelstoke, near the mouth of Tonkawatla Creek (Bouchard and Kennedy 2005:73).*

Oral history from Adams Lake supports the idea that Secwepemc peoples were active in the Illecillewaet Valley during the time of the surveys by non-Native surveyors. An Elder from Adams Lake describes the events of that era and, in doing so, affirms Secwepemc travel through the Valley to Rogers Pass:

> *There was a story that I understand from the Kinbaskets [family]. When they survey crew came out … Rodgers and whoever else was with Alex Kinbasket was trying to find the pass to go over, or the easiest way to get to the Golden area was the idea. So they were going up there, and these people [the surveyors] were coming down. They asked them of course. "This is a restricted area. We are going to be surveying all of*

> *this. What are you doing here?" We were swimming [quiet laughter]. Simple as that. But anyways, regardless shouldn't, push this aside in regards of where our line was. Where did we go, where did we live? Illecillewaet is a big water way. You can go all the ways up. A long way on that river. But the government took off from wherever, and went up over the top to where Rodgers Pass (48:08) and down (July 21, 2009).*

Shuswap Band elders who recently recounted their ancestors guiding the surveyors through the Rogers Pass (Cormier 2015) corroborate this oral history as well.

Secwepemc Knowledge of the Arrow Lakes Area

> *Now I'm going down to Needles up there. I'm going for that trip up there. I'm going to make a speech up there. Why we're up there. Why I know that place. I'm going to tell. And land claim why I want that land. Land claim.*
> Splatsin Elder (TUS 1)

There are a number of different geographical and physical connections between the Eastern Secwepemc and the Columbia River valley, as traditional use research led by Splatsin has demonstrated. These geographical connections include trails which, beyond waterways, conveyed people between the Shuswap and Eagle River valleys in the Fraser River watershed into the Columbia River watershed (see above). Splatsin community members have spoken at length in traditional use study interviews about current and past uses of the Arrow Lakes and Columbia River valley. Hunting is a primary reason for going to the Arrow Lakes, but the collection of berries and medicines, and fishing are also given as reasons to go there.[16]

Trails linked the Secwepemc territories of the Fraser River watershed and these traditional use locations in the Columbia River valley. There are trails that bring people to the Columbia River north of Revelstoke, a trail up the Eagle River goes to Revelstoke, and trails through the Monashee Mountains are identified by a number of sources.

Bouchard and Kennedy allow for the movement of Secwepemc people to the Arrow Lakes for resource gathering but, citing Teit, they indicate that Secwepemc visits to the Arrow Lakes were seasonally limited. According to Teit, the Shuswap:

> *"were always on good terms with the Lakes and often hunted and fished with them. They very seldom wintered on any part of the lakes or river however. Numbers of them came across the mountains to Revelstoke where sometimes in the fall there were as many Shuswap as Lakes. At the end of the fishing and berrying these people went up the Columbia on trapping and hunting expeditions or returned to Shuswap Lake. The other place where the*

[16] Regarding the antiquity of these kinds of trips, Bouchard and Kennedy remark on Teit's conclusion that Secwepemc peoples went to the Arrow Lakes. Consistent with their work, Bouchard and Kennedy are supportive of a Lakes perspective on these visits. They write: "... Teit did record, in notes he made in May 1909, that the Shuswap occasionally came to the Arrow Lakes to get resources -- he also noted that when the Shuswap did so, they were consciously visiting Lakes territory" (Bouchard and Kennedy 2005:52).

> *Shuswap reached the Lakes was by the Fire Valley trail to lower Arrow Lake. They sometimes stayed most of the fall hunting cariboo and fishing. These people came from Spallumcheen and generally returned home for the winter" (Bouchard and Kennedy 2005:52-53; cf. Teit 1908-1920).*

F. DESCRIPTION OF SECWEPEMC TITLE & RIGHTS

Secwepemc – General

The term Secwépemc derives from the Secwepemctsín (Shuswap language) root – cwep, "to be spread out." With the nominalizer prefix s- and the suffix –emc ("people of a place or kind" it thus means something like "the spread-out people" (Ignace 2011).

Academic presentations of Secwepemcúlecw (Shuswap Territory) identify its position on the interior plateau of western North America. By extension, the Indigenous groups living on the western plateau have been associated with the Plateau Culture area (Walker 1998). The western plateau, says Walker, includes, with a few exceptions, lands drained by the Columbia and Fraser Rivers (Walker 1998:1). In general, the cultures of this region are marked by river settlements, reliance on salmon, game, and root plants, villages as the central political units, some social hierarchies, and trade and marriage throughout the region (Walker 1998:3-5).

Verne Ray notes that the Plateau region is different from surrounding Plains, Great Basin, and Subarctic culture areas (Ray 1939). He also identifies internal differences between different Secwepemc regions including the observation that the Secwepemc peoples in the eastern portions of the territory had more Plains influence in their cultural practices. The influences of the Plains cultures included greater tribal organization and less village autonomy, particularly where fighting and warfare were concerned. Villages retained control over local and peace-time affairs (Ray 1939:10). Ray noted interconnections between villages in the east along waterways and, particularly, lakes. Further, the eastern groups adopted fewer coastal cultural features like class organization than the western Secwepemc (Ray 1939:28). While the Western Fraser Secwepemc did briefly adopt, and then reject some coastal stratification, Simpcwemc rejected coastal *and* Iroquoian/Nakoda/Cree adaptations of social expression, up until late fur trade/early colonial amalgamation of survivor groups dictated an assimilation of some of the more dominant conventions. The fact that major Simpcwemc habitation sites, like Téte Jaune Cache weathered many visitations from diverse influences, suggests that Simpcwemc maintained a vibrant and distinct ethno-cultural profile, providing further understanding beyond Ray's broad descriptions of all Secwepemc.

Similar to other plateau cultures, the Secwepemc teachings of values and traditional laws stem from oral history, mainly stories of Sk'lap (Coyote). Teit provides a description of Coyote's role in the oral history of Secwepemc culture:

> *The ancient story people share the history of creation of the Secwepemc people. At the beginning, the earth was very small, but it gradually became larger, emerging more and more from the waters. The people who inhabited the earth*

> *during this period partook of the characteristics of both men and animals. They were called stspet e kwll. Some were cannibals. At that period many kinds of animals, birds and fishes did not exist, nor many kinds of trees, plants, and berries. The earth was much troubled with great winds, fires and floods. In those days the Old-One sent Coyote to travel over the world and put it to rights. He was gifted with magical power beyond that of all other mythological beings. And had great knowledge and cunning; yet often he proved himself to be selfish, lazy, and vain, doing many foolish and bad tricks. In fact, he was fond of amusing himself and playing ticks on other people, and did away with many evil beings. Although Coyote was a long time on earth and traveled all over it, yet he left much of his work undone… The Old-one was the chief of the ancient world, and finished the work of Coyote and other transformers, leaving the earth in the way we see it present" (Teit 1909:595-596).*

There are numerous stories of coyote throughout Secwepemc territory offering moral teachings on stewardship, respect, and ecological knowledge. One of the most profound stories is of how Coyote brought Salmon to the Secwepemc.

Linguistically, Secwepemctsín is divided into two main dialect regions: Eastern, spoken around Chase and areas further east; and, Western Kamloops; and, Northern, spoken around Kamloops, the North Thompson and areas further west (Bouchard and Kennedy 2005:12; Bouchard and Kennedy 1979). The communities, other than Simpcw, discussed in this report are associated with the Eastern dialect. Teit noted that dialectal differences between Secwepemc groups were "slight" and went on to say "the Shuswap Lake division differs the most, these people have a 'heavy,' labored mode of utterance, and their speech sounds jerky and guttural in comparison with that of other Shuswap" (Teit 1909:456; also cited in Ministry of Justice 2012:7). Simpcwemc have always been associated with a northern/western dialect.

The Eastern Secwepemc

This section emphasizes the histories and cultures of the Eastern Secwepemc, including Splatsin, Sexqeltqin (Adams Lake), Simpcw, Skw'lax (Little Shuswap Lake), Neskonlith, and the Kenpesq't (Shuswap Indian Band). These communities are most directly associated with the upper Columbia River watershed and they have a long history of connection the Arrow Lakes, the Revelstoke area, the Big Bend of the Columbia River, and north to the headwaters of the Canoe Reach (Kinbasket reservoir), and through the areas where the towns of Golden and Invermere are located. Teit characterized these communities as part of the Shuswap Lake Division (including Adams Lake Band, Skw'lax, Little Shuswap, and Splatsin), and the North Thompson Division (including the Shuswap Indian Band and Simpcw) (Teit 1909:460-462). For almost 200 years, the Secwepemc people have had their cultural practices described by outsiders. Records come from fur traders, government officials (British Columbia 1876-1910; British Columbia 1916; Ministry of the Attorney General 2009), academics and consultants (Teit 1900; Teit 1906; Teit 1909; Teit 1930; Dawson 1891; Boas 1891; M. Ignace 1998; M. Ignace 2000; Ignace and Ignace 2004; R. Ignace 2008; Bouchard and Kennedy 2007) and explorers and amateur historians (like Moberly 1865a; see also M. Ignace 2000:3). Secwepemc people have also developed their own accounts of their history (e.g. R. Ignace 2008; Williams n.d.;

LeBourdais 2009). Member communities have also conducted dozens of traditional use studies and other historical studies, and these have provided invaluable and direct contributions to this report (eg. Adams Lake and Neskonlith 1999; Splatsin 2008; 2009; DMCS 2012; 2014; Shuswap Indian Band 2008).

The territories of the Sexqéltkemc Te Secwepemc, Simpcw, and Skw'lax are located in the southern interior of British Columbia. The Shuswap Band and its territory are located in the upper Columbia River Valley near the town of Invermere (Shuswap Indian Band 2008). Culturally, anthropologists identify all Secwepemc peoples as Plateau peoples. They speak Secwepemctsín (Shuswap), an Interior Salish Language (M. Ignace 1998). In much of the historical and anthropological literature, they are referred to as Shuswap people (eg. Teit 1909; see M. Ignace 1998).

In his extensive writings about the Shuswap peoples, Teit emphasizes the groups associated with the North Thompson and the Kamloops regions. He provides, however, some descriptions of the territories of the eastern Secwepemc. In this passage, Teit notes the close cultural and historical ties between the Shuswap Lake Division while also noting ties to the Columbia River region around Revelstoke:

> *The Sxstê'llnEmux ('people of the Sxstêlln'). These comprise the Indians on the Upper South Thompson, Shuswap Lake, and Spallumcheen River [now known as the Shuswap River]. They hunt south along Salmon River, north on Adams Lake to the Columbia above Revelstoke, and east around Mabel and Sugar Lakes to Upper Arrow Lake. Sometimes they hunted even beyond the latter in the mountains east of Lardeau and Nakusp. It seems the Arrow Lakes were more or less disputed ground, a band of Okanagan in Washington claiming them almost to as far north as Revelstoke. On the whole, however, they seem to have been more frequently occupied and utilized by the Shuswap. I shall call these people the Shuswap Lake division (Teit 1909:455).*

Teit further studied the Arrow Lakes area after hearing reports of a small band located in the area. After his investigation were concluded, he retracted is statement of the Arrow Lakes being in Secwepemc territory:

> *In my paper on the Shuswap [Teit 1909] I allowed the Shuswap the territory along the Arrow Lakes almost down to Robson. I had not then been in that district, and was misled by some statements of the Shuswap of the Shuswap Lake region, which appeared to be corroborated by white testimony, I to the effect that the Arrow Lake country was former Shuswap territory, partly occupied in recent years by Colville Indians chiefly for hunting and trapping purposes. This is not correct. The Lake tribe occupied from very early times all the country in British Columbia as outlined on the accompanying map, and I have been unable so far to collect any evidence that any part of the territory was ever occupied by other tribes. Further inquiry among the Shuswap confirms this. The only part seemingly in doubt is the extreme north, the old Revelstoke band having been much mixed with Shuswap (Teit 1910-1913).*

Despite Teit's statements on territorial boundaries, there is information that supports a presence of Secwepemc in the Columbia Basin in the pre-contact era. The Secwepemc (often referred to as the Shuswap in older literature) Territory is one of the largest territories of any single Nation within British Columbia, and also includes an area within Alberta. "The territory of the Secwepemc extends from the Columbia River Valley on the east slope of the Rocky Mountains to the Fraser River on the west and from the upper Fraser River in the north to the Arrow Lakes in the south. Secwepemc territory covers a vast area; approximately 180,000 square km." (Secwepemcúlecw 2016). Within this territory, the 17 living Secwepemc bands have their own territorial borders.[17] Archaeologists recognize that there have been people in this interior plateau region since at least 11,500 YBP (years before present), (Morrissey 2009:11, citing Rousseau 2008), and as research technology improves it is probable this academically-recognized date will be pushed back further. Linguistic and archaeological evidence suggests that Secwepemc ancestors have inhabited the area for at least the last 5,000 YBP (Palmer 1975:31), and likely over 9000 YBP (unpublished archaeological data, Adams Lake Band 2016; Historica Canada 2016), with a basic cultural form going back at least 2,000 YBP, and a similar Interior Plateau form dating to approximately 7,000 YBP (Palmer 1975).

The Gore Creek human remains, a man in his 20s or early 30s, found 40 Km. East of Kamloops, were dated to 8250 ± 115. This date can be considered more accurate than is often the case with ancient human remains in Canada (Cybulski *et al.* 1981:49), because the stratigraphic layers of tephra (typically referred to as ash) from the Mount St. Helens eruption (3200YBP), and the Mount Mazama eruption (almost 7000YBP) are clearly superimposed above the Gore Creek skeleton. Carbon Isotope analysis of his bones indicate his diet included primarily land animal proteins and some marine protein (Chisholm and Nelson 1983:85), "likely Pacific salmon that spawned up river" (Historica Canada 2016).

Oral-historical evidence supports the long antiquity of Secwepemc presence within the Territory. For example, varve lines (annual lamination marks from past glacial lakes), are connected with the time of Coyote the transformer, and remembered as being from a time of a major flood (Ignace 2008:59, quoting Teit 1917:13). Also, recorded orally is the water reversal and Coyote's creation of the annual salmon run in the Thompson River system (just to the West of the Columbia River Valley) by his breaking of the fish weir during the time of the transformers (Ignace and Ignace 2011:22; Ignace 2008:59-61). The history of the first inland salmon run, of which the Secwepemc rely on and are intimately connected to, is remembered as the result of Coyote's actions causing the salmon to go up stream every year.

Approximately 9,750 YBP (minimum date) the bursting of the ice dam, near Spences Bridge, reversed the flow of the Thompson River system, from running into the Columbia to instead run into the Fraser River (Ignace and Ignace 2011:22; Ignace 2008:59-61; see also Johnson 2004; and, Johnson and Brennand 2006). In addition, archaeological evidence suggests 9,000 YBP as a minimum date for human occupation of the nearby lower Fraser Canyon (Johnson 2004:30, see also Borden 1965, 1968). These parallel lines of evidence, combined, supports a history of thousands of years of occupation (Ignace and Ignace 2011:22; Ignace 2008:59-61).

[17] Historically there were 28-32 bands, but the devastating effects of disease wiped out 13 villages. See also Section 1.1.1.f. in this report for more details regarding this number and the remaining bands.

As long as people have lived in the region trails and water transportation routes connected key cultural nodes on the landscape. Many of these traditional transportation routes have now become contemporary roads and trails, see Favrholdt (2000, 2009). The Columbia and Thompson Rivers hold special significance for the Secwepemc Peoples, and were main transportation and subsistence features on the landscape. Smaller rivers and creeks also continue to be important to Secwepemc culture and survival as evidenced by the recurring themes in traditional use interviews of fishing and water transportation (e.g. the interviews conducted as part of Behr *et al*. 2016 publication pending, 2017 publication pending). Some examples of trails which connect to the LSA have been documented by Simpcw FN:

a) BC Min of Attorney General (2011): Figure 5: Upper North Thompson circa 1869s: Trail to Columbia River from North of Chu Chua
b) BC Min of Attorney General (2011): Fig 4 (p.31) & Fig 21 (p.77): Lower North Thompson Territory 1835: Trail from Little Fort/Clearwater area to Columbia River
c) Sketch of Govt Map, E&W, Kootenay 1902 (Jules 2005): Trail to Donald on Columbia River from Tete Jaune Cache, BC (Simpcwul'ecw).

Since European-contact, a variety of maps have been produced by colonizers attempting to understand the complex relationships between different groups of people i.e. the Secwepemc Bands, and the geography of the region. These historical maps, have been useful in painting a partial picture of ways in which Secwepemc Peoples have interacted with their landscape. For example, Teit's 1909 map of Secwepemc ethnographic divisions, see Figure 1, for a portion of this map, which is useful in understanding some of the connections between Secwepemc Bands. However, there are limitations to these historical maps, for example maps showing trail use:

> *Map One [not replicated in this report] only shows trails which were known to and recorded by Europeans and Canadians. These would have been the main trails throughout the region, but there were also many lesser trails which would have remained unknown to traders, miners, settlers, missionaries, and surveyors. Many of these trails are well-known and used today to take contemporary Secwepemc into the farthest reaches of their traditional territory (Elias 2009:12, in his report on Secwepemc uses of the Mica 5 and 6 project areas).*

Secwepemc trails, recorded by explorers and workers, visitors to the Territory, can assist in documenting these networks nonetheless. It is important to note that waterways, especially larger rivers and lakes, formed part of Secwepemc transportation routes that were used in conjunction with trails (Favrholdt 2009). Trail networks of the Columbia Watershed have been documented in previous research, Mica 5 and 6 (Adams Lake Indian Band unpublished), and in the Revelstoke area (Favrholdt 2000, 2014), both are within this LSA. These examples illustrate, that, as it is to this day, the area is widely used, with regular roads and trails providing access to different resources and communication hubs. Although no specific research was done, for this report, on trails only within the LSA, it can be surmised that these networks existed across the entire LSA. "Trails are linear archaeological sites and it has been shown, can be predictors of other archaeological sites such as settlements." (Favrholdt 2009:6, see also ARCAS 1996). Therefore, trails can be pivotal in representing additional ways in which the land was, and is, used by Secwepemc People.

During the preparation of this report, the Surveyor General's Vault of the BC Land Title & Survey Authority (which holds many historical maps), and the University of Victoria's McPherson Library, were visited (see Appendix F, for a list of the additional maps reviewed for this report, which were not available from online sources). These maps show the original reserve boundaries from the late 1800s, as well as explorer's maps which predate the creation of reserves. For example, Geologist, George Dawson, traveled through Secwepemc Territory from in 1877-1890. Also, Walter Moberly, who traveled in Secwepemc Territory, 1865, created maps which frequently show locations such as, "favourite Indian hunting grounds…" and within the same journal, a map indicating where "Indian canoes [are] cached" (Moberly 1865b). Although Moberly does not identify his "Indian" guides by Nation, he always traveled with "Indians" and interviewed people about Indigenous place names. He describes "Indian gardens" of "Indian potato" (wapato) which he passed (Moberly 1865b). See Figure 2 showing an example of one of these journal maps which illustrates how the Illecillewaet[18] River (within the LSA) has been used in the past (see also Bouchard and Kennedy 2005). De Smet's map of the area (1846) also refers to baptizing children and marrying "Indian's", likely Simpcw people (Shook 1997:59-60), see Figure 3.

Secwepemc peoples' access to these important locations have been greatly impeded since colonization. When questioned about land-use in this area Secwepemc Elders pointed out to Ignace (2008) that privatization of land in later decades seriously impacted their ability to access places, much later than initial colonization:

> *While the initial wave of land pre-emptions by settlers occurred between the 1860s and the early 1900s, it was in subsequent decades that more and more fences and "no trespassing signs" went up and impeded our people's travels, hunting and food gathering… (Ignace 2008:158; see also Elias 2009:13).*

This was echoed in interviews conducted with Adams Lake Elders:

> *I have to ask permission now, that is how people are, when we used to walk we would just walk in and people knew you were walking to town or walking to visit people now you can't even cross people's property without asking...Yeah it has become more private property. People can get possessive like even I was to cross the road and use the trail to go to Neskonlith I would have to ask the individuals if I can cross, I never used to have to when I was a kid just go through now we have to tell the person." Adams Lake Elder, 2016 ID1519 (Behr et al. 2016 publication pending).*
>
> *That was a camping area there, but people, the non-Natives, started buying land in there and all of a sudden, one year, we went there to go picking and there was a house somewhere in here [referring to map], and we went in there to pick, and that lady chased us out. She said "this is my land" and I said "when was it your land?" I*

[18] The word Illecillewaet, from which the place name is derived, is an Anglicization of the Secwepemc phrase "we were swimming there" (pers. comm. Dave Nordquist, October 6, 2016). However, its meaning also appears as "swift river" (Rayburn 2001:182). The swift River meaning is likely incomplete, as in the Secwepemc Dictionary swift river is: "to churn (of river); swift water, crelrelátkw^{e}" (SCES 1993:112).

said "we have always been picking berries here, ever year, and we come here and we camp." and she said: well they bought it. So that was the end of our picking there, in that area. I don't know what year it was, but all of a sudden we couldn't pick around there. Adams Lake Elder, 2016 ID2508 (Behr et al. 2016 publication pending).

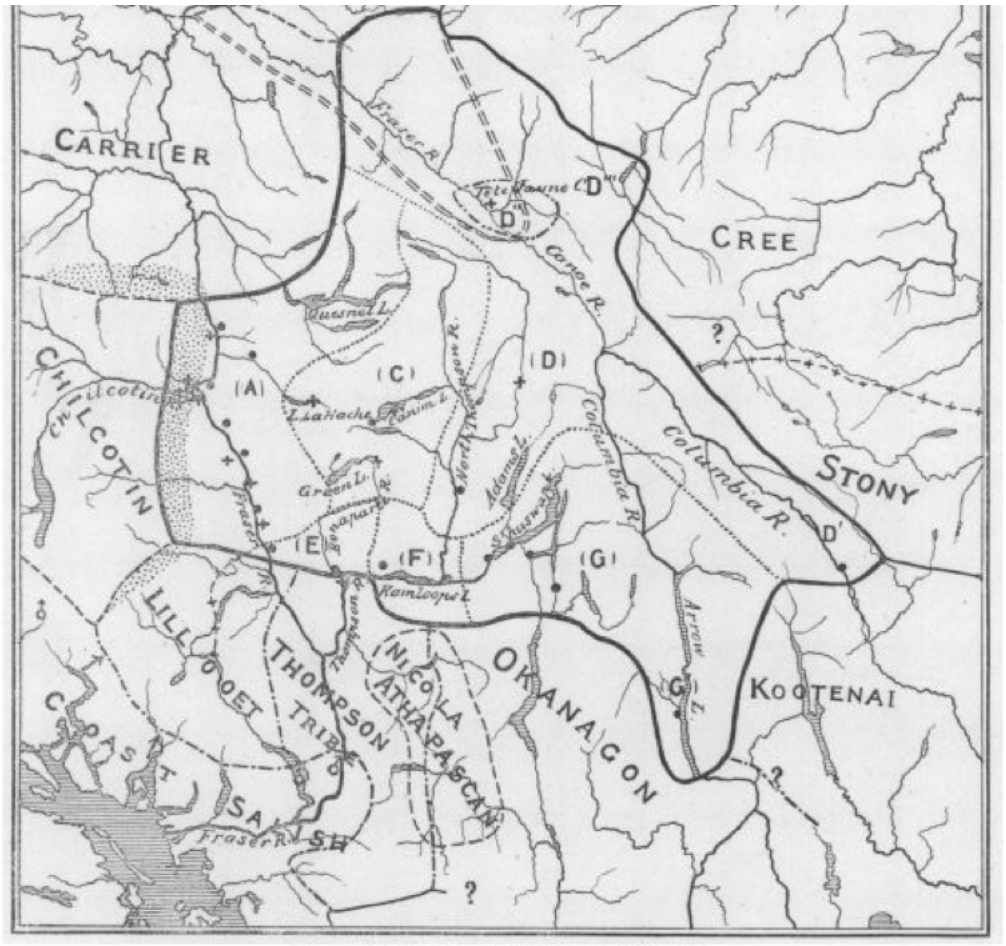

Fig. 199. Map showing the Shuswap Territory.

A, Fraser River Division.
B, Cañon Division, territory now largely occupied by the Chilcotin.
C, Lake Division.
D, North Thompson Division.
D′, Kinbasket.
D″, Former territory of the Iroquois Band.
D‴, Shuswap, Cree, and Iroquois mixed.
E, Bonaparte Division.
F, Kamloops Division.
G, Shuswap Lake Division.
G′, Arrow Lake Band.
●, Villages.
+, Former villages.

Dotted area, territory recently occupied by the Chilcotin. Area at head of Fraser River, enclosed by broken double lines, temporarily occupied by the Sekanai.

Figure 1: A portion of Teit's map 1909:450.

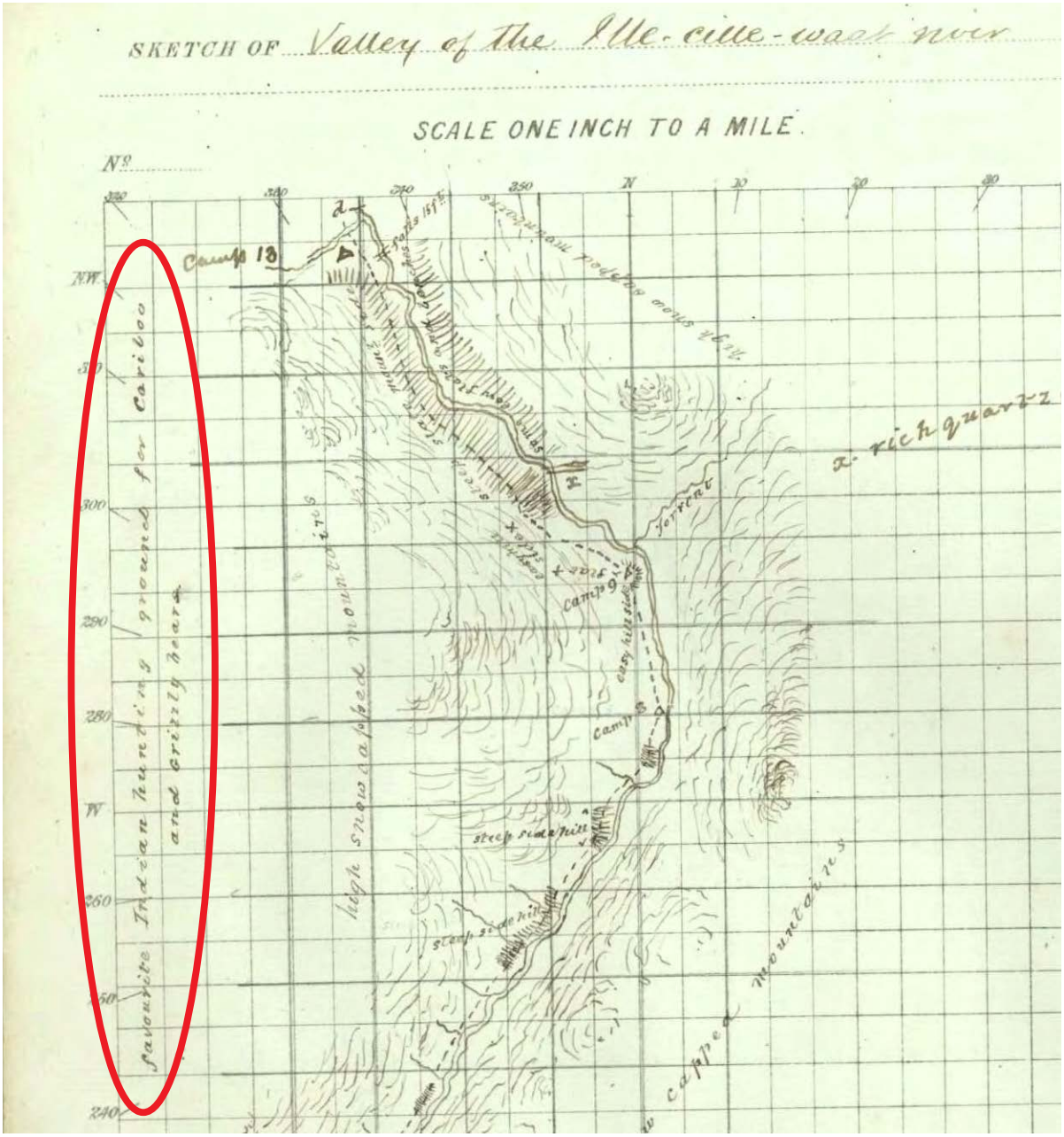

Figure 2: A portion of Moberly's map (1865b) of the Illecillewaet River Valley, with "…Indian hunting ground…" circled in red.

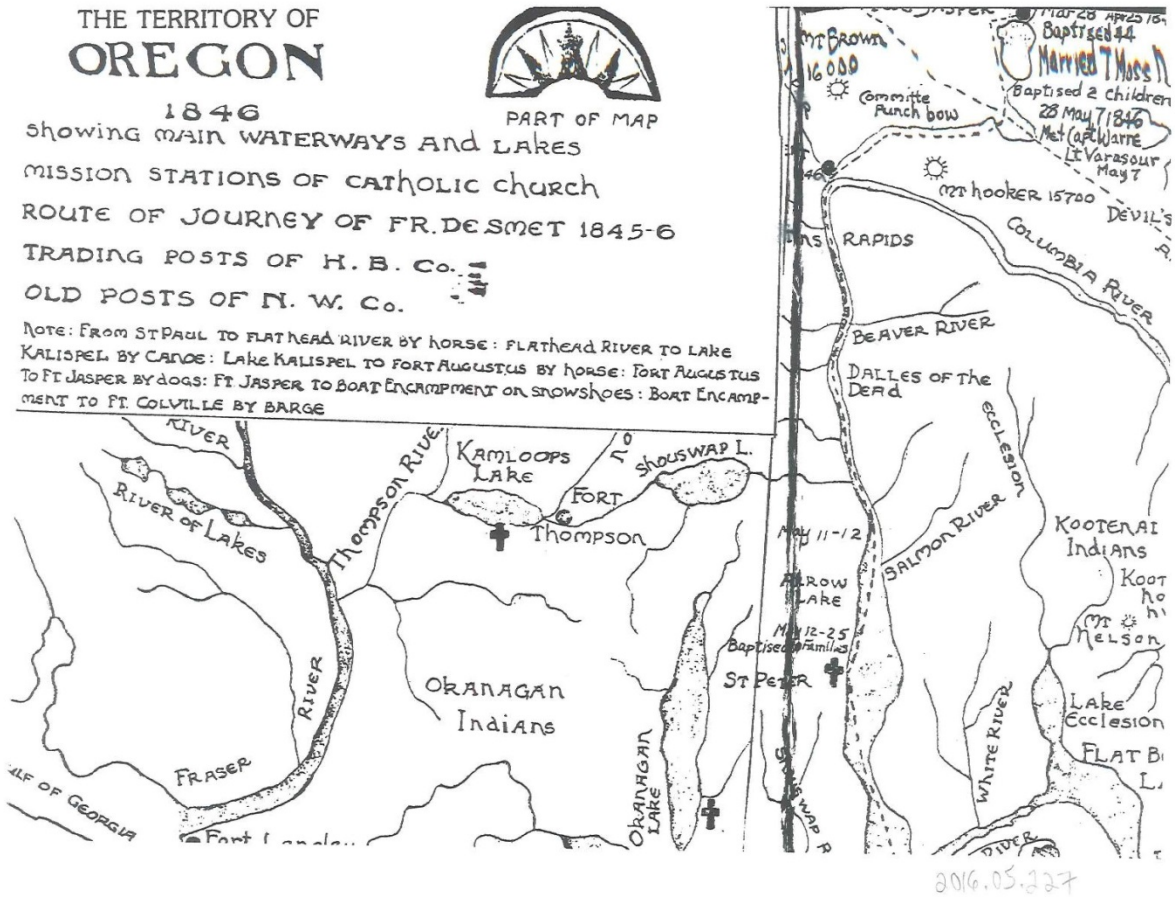

Figure 3: De Smet's map (1846) which indicates baptizing and marrying "Indians" (Shook (1997:59-60).

Historical Secwepemc Economy

Today there are 17 Secwepemc bands including the six, of the Eastern Secwepemc, within this report. Prior to European contact there were 25-32[19] Secwepemc bands. In 1793 Alexander Mackenzie explored Northern Secwepemc Territory with Secwepemc guides assessing the area for the fur trade which would soon take hold (Coffey et al. 1990:7). The subsequent outbreak of a number of diseases including the smallpox epidemic of 1862, which entirely wiped out 13 villages (Coffey et al. 1990:8), accounts for the reduced number of bands.

The Seasonal Round is a description of the economy prior to the Fur Trade. Many elements of the Seasonal Round or traditional economy prior to colonization continue to the current day despite many obstacles. The past economies of the specific Secwepemc bands vary; however, some historical events have had a broad effect on the economies of the entire region and Secwepemc Nation as a whole. Prior to colonial contact, trade networks, between the Northern

[19] This number is not agreed upon within the literature. Teit reported 25 bands prior to the 1860s (see Ignace 1998:203), but others report different numbers, up to as many as 32 bands (Tk'emlúps 2016).

and Southern Secwepemc bands, brought trade items from other areas into the territories. For example, the Northern Secwepemc bands acted as intermediaries between the Southern Secwepemc and the Tsilhqot'in (Cropped Eared Wolf 1996:7, see also Teit 1909:535). Other Nations involved in trading with Secwepemc bands include, the: Carrier [Dakelh], Plains Cree [Nêhiyaw] Stoney [Nakoda], Kootenay [Ktunaxa], Iroquois [Haudenosaunee], and Okanagan [Syilx], with the Secwepemc trading such things as: "Dried salmon, salmon oil, baskets, paint, deer skins, shells and rawhide bags…" (Cropped Eared Wolf 1996:7). European trade items (e.g. brass, copper, iron, and glass beads), had reached the Secwepemc peoples, prior to the arrival of Europeans scouting for fur trading, because of the trade networks which reached from the plains to the coast (Cropped Eared Wolf 1996:11). The fur trade became a major part of the economy which Secwepemc peoples participated in. Fort She-waps, 1812, and Fort Kamloops, 1812 (built by competing companies) were both located near Kamloops and used as trading outposts. By 1827 "...beaver was near extinction in the area." (Cropped Eared Wolf 1996:21, see also Johnson 1937:77). As pelts became unavailable, the existing trade networks and Forts continued to function as trading outposts, although the items traded changed (Cropped Eared Wolf 1996:21, Coffey et al. 1990:15). Cox's descriptions of his journey, including on the Columbia River and through the Canoe Valley and River in May 1817 (Cox 1831), also sheds light on this time period.

Shook (1997:59-60) identifies some of Simpcw's specific historical uses of the LSA as: 1) travel corridor, 2) hunting area, and 3) trade corridor to trade location. One example of this, is: "Leo [Dennis: b. 1875, married Annie Felix John (NTIB/Simpcw), d. 1945] was a noted bear hunter….one spring in the Pat Creek Tributary of the Columbia River he took 12 grizzly and 13 black bears. While taking the skins by raft down the Columbia River to Revelstoke, he was shipwrecked in the Priest Rapids [Dalle d Mort, Priests died there in 1895, Murton & Ferguson 1973]. He lost all his bearskins…."

Following the fur trade, the gold rush was another major colonial impact on the Secwepemc. The first gold at Fort Kamloops was bought by the HBC in 1852 (Coffey *et al.* 1990:19), which had by 1858 become a gold rush (Cropped Eared Wolf 1996:19). Some Secwepemc people participated in mining gold, and others were involved as guides, packers and labourers for other miners (Coffey *et al.* 1990:26). The impact to the traditional economy, and divisions, often created for bureaucratic rational, which arose from the creation of reserves cannot be underestimated. The relationships between Secwepemc Bands remain strong to this day, and although the below section outlines the communities based on Band and reserve divisions, it should be noted that this represents a colonial imposition rather than the divisions past Secwepemc communities considered for themselves. For example, the Sexqeltkemc (Adams Lake, Neskonlith, Splatsin) (Ministry of Attorney General 2012:5-7) represents an important alliance which predates the creation of colonial reserves.

Today, the web page of the Shuswap Nation Tribal Council offers sketches of some of the Eastern Secwepemc groups. Information from these sketches, written by the communities themselves, are further elaborated upon below with information from other sources[20], including language, population and employment statistics maintained by Canadian Government databases (AANDC 2016), and historical literature. While it is not the intention to review each Secwepemc Band's entire history with colonialism and industrial development within this Section C, some notable historical events have occurred which will be considered to understand the present day locations of reserves within the Traditional Territories of the Eastern Secwepemc.

In the past, Adams Lake, Little Shuswap Lake, and Neskonlith were very closely related to each other (Cooperman 1989:2 quoting Teit). In 1862 Magistrate and Assistant Commissioner of Lands and Works (William Cox) met with some Secwepemc Chiefs. Among these was Chief Neskonlith, who asked Cox to mark his lands on the map which Cox was creating (Spirit Map 2016). Chief Neskonlith's lands were marked and this formed the Neskonlith Douglas Reserve. "Cox placed the first stake and the remaining stakes are placed by Chief Neskonlith." (Spirit Map 2016). This original recognition of lands was reduced, when Trutch replaced Douglas, as Governor of BC, and opened this land for pre-emptions in 1867, combining Adams Lake, Little Shuswap Lake and Neskonlith for total cut off lands (Spirit Map 2016; see also Adams Lake and Neskonlith 1999:38-44). This is evidenced on the map which outlines the "Plan of the Salmon Arm Indian Reserves allotted to the Niskahnilth, Adams Lake, & Little Shuswap Lake Tribes" (Vernon and O'Reilly 1889). Between 1913-1916 these lands were further reduced under the McKenna-McBride Royal Commission (Spirit Map 2016).

Today these three Secwepemc Bands, although historically very closely related, operate as primarily separate governing entities, on separate reserves with separate administration. Chief Sehowtken was baptized with the name Adam in 1849, and Adams Lake and Adams River are named after him. Chief Niskonlith was Chief Sehowtken's Grandson, likely by his eldest son: Antoine Gregoire (Cooperman 1989:4).

Sexqeltqín (Adams Lake Indian Band)

f.1. Data Quality

Much of the data used in this section is referenced from the Indigenous and Northern Affairs Canada First Nation Profiles and is derived from Statistics Canada data sources. The Statistics Canada Census data can be challenged in accuracy when representing smaller population. In addition, there have been challenges in obtaining accurate numbers for First Nation community over past Census periods.

[20] One of these sources is Canadian Government-collected statistics (AANDC 2016). To maintain privacy in communities with low populations, where it may be easy to identify an individual, Canada census statistics may be rounded to as much as 5-10%, which can be a significant distortion of numbers when dealing with communities of approximately 300 persons. See stats Canada website for further information about their privacy policy (AANDC 2016).

Furthermore, a unique challenge emerged for the 2011 Census when the Federal Government abandoned the long-form Census and replaced it with the National Household Survey (NHS). Given the low response rate, this creates challenges for the accuracy of data such as education, experienced labour force, labour force participation, and personal and household income data for communities with smaller populations.

Specifically, for the 2011 NHS estimates, the global non-response rate (GNR) is used as an indicator of data quality. This indicator combines complete non-response (household) and partial non-response (question) into a single rate. The value of the GNR is presented to users. A smaller GNR indicates a lower risk of non-response bias and as a result, lower risk of inaccuracy. The threshold used for the estimates' suppression is a GNR of 50% or more. For the Sexqeltqín main populated reserve, the GNR was 22.9% (Statistics Canada. 2016a).

Issues with relying on Census data to represent First Nation communities is that often 50% or more of the member Band population does not reside on the home reserves. In the case of the Sexqeltqin, 381 members or 48% of the total population resides off-reserve. Finally, there will be a number of non-Band members residing on-reserve who will be included in the Census and NHS data. The larger the non-Band resident presence, the more difficult it can be to determine the population characteristics of the on-reserve, own Band population.

f.2. Overview

Teit reported that most of the Band had, in the past, wintered at the outlet and lower portion of Adams Lake, with some of them occasionally wintering on Great and Little Shuswap Lake (Cooperman 1989:2Today, most Adams Lake members living on-reserve live at the foot of Little Shuswap Lake (Cooperman 1989:2). The majority of the administrative offices for Adams Lake are located on this reserve, IR#4, adjacent to the Village of Chase and overlooking Little Shuswap Lake.-They have established a number of services in this community.

Of the seven Adams Lake reserves, Sahhaltkum I.R. 4 (near Chase on Shuswap Lake) is the most populated, and contains the majority of administrative buildings and the Secwepemctsin language immersion school. Switsemalph I.R. 6, located near Salmon Arm, provides health and social services at the Nexe7yélst/Pierre Moyese Centre (AANDC 2016, Adams Lake 2016). The Centre offers a wide variety of programs for both insured and uninsured individuals within the community (e.g. post-natal house calls, specific Elders programs, youth programs).

In addition to the Nexe7yélst/Pierre Moyese Centre, health is supported in the community by having a fitness facility and gymnasium for sports events. Participation in traditional Secwepemc lifeways, such as harvesting traditional foods and medicines, contribute both to the dietary health and positive mental health of the community, as identified throughout this report.

Sexqeltqin has a Comprehensive Strategic Planning Department (CCSPD), and is implementing a comprehensive community strategic plan (Adams Lake 2015). The current Sexqeltqin economic development initiative includes the ownership of The Sexqeltqin Development Corporation (ALDCO). ALDCO initiatives include West Harbour Village, a subdivision geared towards seniors on Shuswap Lake (Adams Lake 2016). The Sexqeltqin Natural Resources Department, which uses Global Information System (GIS) to meet their own mapping needs, is

expanding to offer services to clients in other parts of the province (Adams Lake 2016). Sexqeltqin also has a Recreation and Conference Centre available for rent. In 1990 Sexqeltqin built a log cabin style Spiritual Building, QweQwetsitn, which accommodates 200 people for special events (Adams Lake 2015).

Perhaps the most inspiring of the Adams Lake major facilities, is the Secwepemc language immersion school (T'selcéwtqen Clleqmél'ten, Chief Atahm School). The people who lived in the Adams Lake area, Cstelnec in Secwepemctsin, spoke an Eastern dialect of Secwepemctsin. The state of the Secwepemc language today (the fact that so many young people are learning the language) can be attributed in a large part to the success of the T'selcéwtqen Clleqmél'ten, Chief Atahm School:

> *Our goal is ensuring that kids leave school with a sound education and with a sense of pride in their heritage that was denied their parents and grandparents through a century of colonization and residential schools. (Chief Atahm School, Indspire website 2016).*

f.3. Sexqeltqin Population

As outlined in Table 4, as of November 2016, the Sexqeltqin had a registered population of 799 persons, living both on- and off-reserve. As illustrated, 381 or 48 percent live off-reserve, while the remaining members live on reserve.

Table 4: Registered Sexqeltqin Population By Residency, November 2016

Residency	# of People		
	Male	**Female**	**Total**
Registered On Own Reserve	183	176	359
Registered On Other Reserves	34	25	59
Registered Off Reserve	168	213	381
Total Registered Population	385	414	799

Source: IANAC. 2016

The on-reserve population resides on four of the seven Sexqeltqin reserves (Adams Lake 2016) including:

- Hustalen I.R. 1 (at the South end of Sexqeltqin, at the outlet to Adams River);
- Sahhaltkum I.R. 4 (on the South Thompson River, Southwest of Little Shuswap Lake);
- Squaam I.R. 2 (on the North shore of Squaam Bay, West of Sexqeltqin); and
- Stequmwhulpa I.R. 5 (on the Southwest shore of Little Shuswap Lake), Switsemalph I.R. 6 (on the West shore of Salmon Arm on Shuswap Lake).

f.4. Secwepemctsin Language

The original reason for the decrease in Secwepemctsin being spoken, and which necessitated the creation of the immersion school, has been attributed to residual effects of two key events including:

- Incorporation of Sexqeltqin Band members into the residential school system; and,
- Colonially-imposed participation of Secwepemctsin speakers into a social economy where English has to be learned in order to participate in the job market (Indigenous Foundations 2016; see also the language section of this report, Section 12.2.4).

The Secwepemc language program began in 1987 by parents from Sexqeltqin, Neskonlith, and Little Shuswap Lake, whose work, together, lead to the creation of an immersion program for children from infancy to five years of age. The first of its kind in BC, the program became a school in 1991(T'selcéwtqen Clleqmél'ten, Chief Atahm School website 2016).

> *Now only a handful of people knows Secwepemctsin, and it is an endangered language, on the verge of extinction. There are only about 300 people left who speak it, and most of them are elders. (First Voices website, 2016).*

While only 2% of the Secwepemc population (not just Sexqeltqin, but the whole Nation) is reported as being fluent, 12% are semi-speakers, and 11.5% are learners, this means that an impressive number are learning the language, when compared with other Indigenous languages in BC (FPCC 2014:48). With ongoing community interest to learn Secwepemctsin, knowledge of the language is increasing. In the other communities discussed in this report where statistics are available for the 2006 and 2011 Census reports, there has been an increase in knowledge of the Indigenous language on some reserves, whereas in other communities there has been a decrease. Statistics are not available for Sexqeltqin reserves from the 2006 census, so it is not known whether knowledge of the language is increasing.

Table 5 outlines the language knowledge reported in the 2011 Census for the on-reserve population of the Sexqeltqin First Nation community.

Table 5: Language Statistics for Sexqeltqin On-reserve, 2011.

	Female	Male	Total
Language Knowledge	235	245	480
Aboriginal language(s)	65	45	110
Pop. with Aboriginal languages first learned (%)	10.6	10.0	10.4
Pop. with Aboriginal spoken at home (%)	21.3	16.0	17.7
Pop. with knowledge of Aboriginal lang. (%)	27.7	18.0	22.9

Source: IANAC. 2016

f.5. On-reserve Age Characteristics

Table 6 outlines the age characteristics for the on-reserve population (i.e., all persons living on Sexqeltqin reserves, regardless of whether they are a band member or not) and compares the age categories to the larger Thompson Nicola Regional District. As highlighted, the on-reserve Sexqeltqin population has a much higher share of its population in the under 19-year age category. It also has a much smaller share of its population over the age of 65.

Table 6: Sexqeltqin On-reserve Age Characteristics and Comparison to Thompson Nicola Regional District, 2011.

	Sexqeltqin				**Thompson Nicola RD**
	Male	**Female**	**Total**	**% Share**	**% Share**
Age 0-19	90	70	160	33.3%	21.7%
Age 20-64	135	140	275	57.3%	61.3%
Age 65 and over	20	25	45	9.4%	17.0%
Total All persons	245	235	480	100.0%	100.0%
Median Age	34	36.6	35.3		44.0

Source: IANAC. 2016 and Statistics Canada. 2016b.

The median age of people living on Sexqeltqin reserves (as of 2011) is 35.3 years-old (as compared to the median age of the larger Thompson Nicola Regional District population with an median age of 44.0 years-old).

f.6. On-reserve Household Characteristics

Table 7 highlights the household characteristics of the on-reserve housing for the Sexqeltqin. As illustrated, half the households are couple families, this is similar to the Thompson Nicola Regional District. Sexqeltqin households however, include a larger share of lone parent households than seen at the regional district level. In addition, the median household income is $34,143 compared to $59,385 for the larger Regional District (2011).

Table 7: Sexqeltqin On-reserve Household Characteristics and Comparison to Thompson Nicola Regional District, 2011.

	Sexqeltqin		**Thompson Nicola RD**
Total - All private households	160	100.0%	100.0%
One family households	125		
Couple family households	80	50.0%	54.6%
Female lone parent households	30	18.8%	8.8%
Male lone parent households	15	9.4%	2.7%

	Sexqeltqin		Thompson Nicola RD
Multi-family households	10	6.3%	1.8%
Non-family households	25	15.6%	32.1%
Median household income ($)	34,143		59,385

Source: IANAC. 2016 and Statistics Canada. 2016b.

f.7. On-reserve Education Attainment

Of the 480 residents living on-reserve in 2011, 355 were over 15 years of age (i.e. employable). **Table 8** summarizes the educational attainment of these residents and highlights the high number of both males and females who have obtained trades and apprenticeships or other non-university certificates. As illustrated, Sexqeltqin on-reserve population has a higher share of trades and apprenticeship or other non-university certificate than observed in the larger Thompson Nicola Regional District.

Table 8: Sexqeltqin On-reserve Education Attainment and Comparison to Thompson Nicola Region District, 2011.

	Sexqeltqin				Thompson Nicola RD
Highest Degree or Certificate	**Male**	**Female**	**Total**	**% Share of Total**	**% Share of Total**
No degree, certificate or diploma	60	40	100	28.2%	19.8%
High school diploma or equivalent	50	60	110	31.0%	30.4%
Trades/apprenticeship or other non-university certificate	50	55	105	29.6%	14.1%
University certificate below bachelor level	10	15	25	7.0%	21.7%
University degree (bachelor level or higher)	5	10	15	4.2%	14.1%
Population 15 years and over	175	180	55	100.0%	100.0%

Source: IANAC. 2016 and Statistics Canada. 2016b.

f.8. On-reserve Experienced Labour Force

Table 9 outlines the percentage shares of the on-reserve Sexqeltqin experienced labour force by industrial sector and compares these percentage shares with the larger Thompson Nicola Regional District. As illustrated, there is a large share of the experienced labour force in health and education sector followed by manufacturing and construction industries. Unfortunately, the reliability of the National Household Survey in 2011 Statistics Canada has allocated a large portion of the labour force being allocated to other services, which includes a wide range of activities including, arts, entertainment and recreation; public administration; and, accommodation and food services.

Table 9: Sexqeltqin On-reserve Experienced Labour and Comparison to Thompson Nicola Regional District, 2011.

	Sexqeltqin	Thompson Nicola RD
Population 15 years and over	355	67,415
Agriculture, resource based	5.6%	8.9%
Manufacturing, construction	8.3%	14.0%
Wholesale, retail	5.6%	16.2%
Finance, real estate	5.6%	4.2%
Health, education	25.0%	20.3%
Business services	0.0%	8.7%
Transportation, warehousing	5.6%	6.1%
Other services	44.4%	21.6%
Total	100.0%	100.0%

Source: IANAC. 2016 and Statistics Canada. 2016b.

f.9. On-reserve Labour Force Participation

The 2011 census data for the Sexqeltqin reserve populations shows that almost 23% of the employable population is unemployed, this is much higher than the larger Thompson Nicola Regional District. In addition, the unemployment rate is much higher on-reserve for males than it is for females.

Table 10: Sexqeltqin On-reserve Labour Participation and Comparison to Thompson Nicola Regional District, 2011.

	Sexqeltqin			Thompson Nicola RD		
Labour Force Indicators	Male	Female	Total	Male	Female	Total
Participation rate	54.3%	51.4%	49.3%	66.5%	60.4%	63.4%
Employment rate	37.1%	45.7%	39.4%	59.5%	55.3%	57.3%
Unemployment rate	26.3%	11.1%	22.9%	10.5%	8.6%	9.6%

Source: IANAC. 2016 and Statistics Canada. 2016b.

Neskonlith

f.10. Data Quality

Much of the data used in this section is referenced from the Indigenous and Northern Affairs Canada First Nation Profiles and is derived from Statistics Canada data sources. The Statistics Canada Census data can be challenged in accuracy when representing smaller population. In addition, there have been challenges in obtaining accurate numbers for First Nation community over past Census periods.

Furthermore, a unique challenge emerged for the 2011 Census when the Federal Government abandoned the long-form Census and replaced it with the National Household Survey (NHS). Given the low response rate, this creates challenges for the accuracy of data such as education, experienced labour force, labour force participation, and personal and household income data for communities with smaller populations.

Specifically, for the 2011 NHS estimates, the global non-response rate (GNR) is used as an indicator of data quality. This indicator combines complete non-response (household) and partial non-response (question) into a single rate. The value of the GNR is presented to users. A smaller GNR indicates a lower risk of non-response bias and as a result, lower risk of inaccuracy. The threshold used for the estimates' suppression is a GNR of 50% or more. For the Neskonlith main populated reserve, the GNR was 24.1% (Statistics Canada. 2016a).

Issues with relying on Census data to represent First Nation communities is that often 50% or more of the member Band population does not reside on the home reserves. In the case of the Neskonlith, 334 members or 51% of the total population resides off-reserve. Finally, there will be a number of non-Band members residing on-reserve who will be included in the Census and NHS data. The larger the non-Band resident presences the more difficult it can be to determine the population characteristics of the on-reserve Neskonlith population.

f.11. Overview

Neskonlith has three communities in three locations: IR#1, IR#2 and IR#3. Both IR#1 & IR#2 are located in the Chase area and IR#3 is located adjacent to Salmon Arm. Among Neskonlith's community initiatives, Melamen Centre, located on Switsemalph I.R. 3, coordinates health services including mental health and counselling (Neskonlith 2016). Participation in traditional Secwepemc lifeways, such as harvesting traditional foods and medicines, contribute both to the dietary health and positive mental health of the community, as identified throughout this report.

The current socio-economy of Neskonlith includes band-owned Sk'atsin Resources LLP, which specializes in land-based contracts, e.g. cultural monitoring, environmental monitoring, fence-building, geotechnical drilling, and habitat restoration. Neskonlith is currently developing a Comprehensive Community Plan (publication pending).

Neskonlith is a member of the Shuswap Nation Tribal Council.

f.12. Neskonlith Population

Neskonlith had a registered population of 657 persons in November 2016. This number includes members living on and off reserve. Within this population, 266 members are living on-reserve on one of Neskonlith's three reserves.

Table 11: Neskonlith Population By Residency, November 2016.

Residency	**# of People**		
	Male	**Female**	**Total**
Registered On Own Reserve	139	127	266

Registered On Other Reserves	29	28	57
Registered Off Reserve	167	167	334
Total Registered Population	335	322	657

Source: IANAC. 2016

The on-reserve population resides on three reserves including:

- Neskonlith I.R. 1 (on the west side of the South Thompson River);
- Neskonlith I.R. 2 (on the east side of the South Thompson River); and,
- Switsemalph I.R. 3 (on the West shore of Salmon Arm on Shuswap Lake) (Neskonlith 2016).

Of the three Neskonlith reserves, Neskonlith I.R. 2 is the most populated.

f.13. Sewcepemctsin Language

In 1987 concerned parents from Neskonlith, along with Sexqeltqin Indian Band and Little Shuswap Lake Indian Band, worked together to start a language revitalization program for young children which lead to the creation of a Secwepemctsin immersion school in 1991 on an Adams Lake Indian Band reserve (T'selcéwtqen Clleqmél'ten, Chief Atahm School website 2016). These initiatives contribute to the overall health of the community through cultural continuity.

According to government statistics regarding knowledge of an Indigenous language among on-reserve Neskonlith populations, knowledge of the language is increasing. For example, in 2006, 25.9% of Neskonlith population was identified as having knowledge of an Aboriginal language, while in 2011 32.3% did (IANAC 2016). The table below outlines the language knowledge reported in the 2011 Census for males and females on-reserve. As illustrated, there were approximately 105 Secwepemctsin language speakers on-reserve in 2011.

Table 12: Language Statistics For Neskonlith On-Reserve

	Male	Female	Total
Language Knowledge	175	150	325
Aboriginal language(s)	55	50	105
Pop. with Aboriginal languages first learned (%)	17.1	20	18.5
Pop. with Aboriginal spoken at home (%)	25.7	26.7	26.2
Pop. with knowledge of Aboriginal lang. (%)	31.4	33.3	32.3

Source: IANAC. 2016

f.14. On-reserve Age Characteristics

Table 13 outlines the age characteristics for the on-reserve population (i.e., all persons living on Sexqeltqin reserves, regardless of whether they are a band member or not) and compares the age categories to the larger Thompson Nicola Regional District. As highlighted, the on-reserve Neskonlith population has a much higher share of its population in the under 19-year age category, and a much smaller share in the over 65-year age category.

Table 13: Neskonlith On-Reserve Age Characteristics and Comparison to Thompson Nicola Regional District, 2011

				Neskonlith	Thompson Nicola RD
	Male	**Female**	**Total**	**% Share**	**% Share**
Age 0-19	75	40	115	35.4%	21.7%
Age 20-64	90	100	190	58.5%	61.3%
Age 65 and over	10	10	20	6.2%	17.0%
Total All Persons	175	145	325	100.0%	100.0%
Median Age	36.4	30.4	34.5		44.0

Source: IANAC. 2016 and Statistics Canada. 2016b.

The median age of Neskonlith members living on-reserve in 2011 was 34.5 years old (as compared to the median age of the Thompson Nicola Regional District of 44.0 years).

f.15. On-reserve Household Characteristics

Table 14 highlights the household characteristics of the on-reserve housing for the Neskonlith. As illustrated, approximately 45% of households are couple families. This is a lower share than in the larger Thompson Nicola Regional District. In addition, 25% of Neskonlith on-serve households are female lone parent. This is much higher share than observed at the larger Region.

Table 14: Neskonlith On-reserve Household Characteristics and Comparison to the Thompson Nicola Regional District, 2011.

	Neskonlith		Thompson Nicola RD
	#	**% Share**	**% Share**
Total - All private households	100	100.0%	100.0%
One family households	70		
Couple family households	45	45.0%	54.6%
Female lone parent households	25	25.0%	8.8%
Male lone parent households	0	0.0%	2.7%
Multi-family households	10	10.0%	1.8%
Non-family households	20	20.0%	32.1%
Median household income ($)	,956		$59,385

Source: IANAC. 2016 and Statistics Canada. 2016b.

In addition, the median household income for Neskonlith on-reserve population is $31,956, compared to $59,385 for the larger Region.

f.16. On-reserve Education Attainment

Of the 325 residents living on-reserve in 2011, 240 were over 15 years of age (i.e. employable). **Table 15** summarizes the educational attainment of these residents and highlights the high number of both males and females who have obtained trades and apprenticeships or other non-university certificates. This is much higher than at the larger Thompson Nicola Regional District level. In addition, over 6% of on-reserve residents have received university degrees or higher.

Table 15: Neskonlith On-reserve Education Attainment and Comparison to Thompson-Nicola Regional District, 2011.

	Neskonlith				Thompson Nicola RD
Highest Degree or Certificate	**Male**	**Female**	**Total**	**% Share of Total**	**% Share of Total**
No degree, certificate or diploma		30	70	29.2%	19.8%
High school diploma or equivalent only		30	70	29.2%	30.4%
Trades/apprenticeship or other non-university certificate		40	70	29.2%	14.1%
University certificate below bachelor level		10	15	6.3%	21.7%
University degree (bachelor level or higher)		10	15	6.3%	14.1%
Population 15 years and over	20	120	240	100.0%	100.0%

Source: IANAC. 2016 and Statistics Canada. 2016b

f.17. On-reserve Experienced Labour Force

Table 16 outlines the percentage shares of the on-reserve Neskonlith experienced labour force and compares these percentage shares with the larger Thompson Nicola Region. As illustrated, there is a large share of the experienced labour force in agriculture and the resource based sector followed by wholesale, retail, health and education. Unfortunately, the low reliability of the National Household Survey in 2011has resulted in Statistics Canada allocating a large portion of the labour force to other services which includes a wide range of activities including arts, entertainment and recreation; public administration; and, accommodation and food services.

Table 16: Neskonlith On-reserve Experienced Labour Force and Comparison to Thompson Nicola Regional District, 2011.

	Neskonlith	Thompson Nicola RD
Population 15 years and over	240	67,415
Agriculture, resource based	14.8%	8.9%
Manufacturing, construction	7.4%	14.0%
Wholesale, retail	11.1%	16.2%
Finance, real estate	0.0%	4.2%
Health, education	11.1%	20.3%
Business services	0.0%	8.7%
Transportation, warehousing	0.0%	6.1%
Other services	55.6%	21.6%
Total	100.0%	100.0%

Source: IANAC. 2016 and Statistics Canada. 2016b.

f.18. On-reserve Labour Force Participation

The 2011 census data for the Neskonlith reserve populations shows that almost 35% of the employable population is unemployed. This is much higher than the larger Thompson Nicola Regional District. In addition, the employment rate is much higher for on-reserve females than it is for males.

Table 17: Neskonlith On-reserve Labour Force Participation and Comparison to Thompson Nicola Regional District, 2011.

	Neskonlith			Thompson Nicola RD		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**
Participation rate	58.3%	65.2%	60.4%	66.5%	60.4%	63.4%
Employment rate	33.3%	47.8%	41.7%	59.5%	55.3%	57.3%
Unemployment rate	35.7%	33.3%	34.5%	10.5%	8.6%	9.6%

Source: IANAC. 2016 and Statistics Canada. 2016b.

Splatsin

f.19. Data Quality

Much of the data used in this section is referenced from the Indigenous and Northern Affairs Canada (IANAC) First Nation Profiles and is derived from Statistics Canada data sources. The Statistics Canada Census data can be challenged in accuracy when representing smaller population centres. In addition, there have been challenges in obtaining accurate numbers for First Nation communities over past Census periods.

Furthermore, a unique challenge emerged for the 2011 Census when the Federal Government abandoned the long-form Census and replaced it with the National Household Survey (NHS). Given the low response rate, this created special challenges on the reliability for data such as education, experienced labour force, labour force participation, and personal and household income data for these communities.

Specifically, for the 2011 NHS estimates, the global non-response rate (GNR) is used as an indicator of data quality. This indicator combines complete non-response (household) and partial non-response (question) into a single rate. The value of the GNR is presented to users. A smaller GNR indicates a lower risk of non-response bias and as a result, lower risk of inaccuracy. The threshold used for the estimates' suppression is a GNR of 50% or more. For the Splatsin main populated reserve, the GNR was 28.2% (Statistics Canada. 2016a).

The issue with relying on Census data to represent First Nation communities is that often 50% or more of the member Band population does not reside on the home reserves. In the case of the Splatsin, 496 members or 55% of the total population resides off-reserve. Finally, there will be a number of non-Band members residing on-reserve who will be included in the Census and NHS data. The larger the non-Band resident presence, the more difficult it can be to determine the population characteristics of the on-reserve Splatsin population.

f.20. Overview

The Splatsin people reside on Indian reserve lands adjacent to the City of Enderby to the south and across the Shuswap River to the east. The Splatsin are the most southern tribe of the Secwepemc Nation, the largest Interior Salish speaking First Nation in Canada whose aboriginal territory stretches from the BC and Alberta border near the Yellowhead Pass to the plateau west of the Fraser River, southeast to the Arrow Lakes and to the upper reaches of the Columbia River. The Shuswap River was an integral transportation route used to travel from village to village and to food gathering areas of the Splatsin. The Splatsin or 'Spallumcheen', the anglicized name they are commonly referred to as, are governed by an elected Chief and Council.

The Splatsin historian and linguist, the late Cyndi Williams, described Splatsin this way:

> *Splatsin is pronounced 'sblajeen' and means the riverbanks, where the Splatsinac lived, along the Shuswap River between Mabel Lake which is the headwater, to Sicamous, which comes from another Shuswap word meaning 'in between' ... The Eagle River empties into the Shuswap Lake [at Sicamous] and the greater winter village was located at its mouth… In the Enderby area, as with the other tribes, a different dialect is spoken but they can usually understand one another as there are a lot of similarities within the language.*

Enderby I.R. 2 is the main Splatsin reserve with the largest population, all of the three reserves community facilities, including the Splatsin Community Centre, which includes meeting rooms, a gymnasium and conference hall, and catering services. The building was designed with native plant landscaping, a vegetative roof, and is designed to resembles the Secwepemc *c ,[7] istkten* winter dwelling pithouse (Splatsin 2016).

Splatsin Health Services provides medical services and in addition offers support in the form of counseling, as well as recreational activities for youth (Splatsin 2016). Participation in traditional Secwepemc lifeways, such as harvesting traditional foods and medicines, contribute both to the dietary health and positive mental health of the community, as identified throughout this report.

Splatsin's current economic base includes the Splatsin Development Corporation. This Corporation oversees or partners with a number of companies, such as: Quilakwa Investments Ltd, which operates the Quilakwa Gas Station (Quilakwa Centre also has a Tim Horton's and artisan gallery), Convenience Store and RV Park; Splatsin Construction Services LLP (which is partnered with Landmark Solutions Ltd); Monashee Community Forest (partnered with the Village of Lumby), (Splatsin 2016).

In 2007 the band-owned natural resource management company Yucwmenlúcwu (Caretakers of the Land) LLP was initiated to provide forestry, environmental and archaeological services. Yucwmenlúcwu is also overseen by the Splatsin Development Corporation.

In addition, agriculture is identified in Splatsin's 2013 comprehensive community plan, for future economic growth. Splatsin already operates three farms, one vineyard, one cattle forage operation, and one nursery, and intends to expand in the future (Splatsin 2013:42).

Splatsin is a member of the Shuswap Nation Tribal Council.

f.21. Splatsin Population

Splatsin (formerly referred to in ethnographic literature as Spallumcheen) has a registered population of 895 persons in November 2016. This number includes members living on and off reserve. Within this population, 325 members are living on-reserve on two of Splatsin's three reserves.

Table 18: Splatsin Population By Residency, November 2016.

	# of People		
	Male	**Female**	**Total**
Registered On Own Reserve	170	155	325
Registered On Other Reserves	42	31	73
Registered Off Reserve	219	278	497
Total Registered Population	431	464	895

Source: IANAC. 2016

The two populated reserves include:

- Enderby I.R. 2 (at Enderby on the Shuswap River at the mouth of Fortune Creek), and,
- Salmon River I.R. 1 (Splatsin, on the east side of the Salmon River, slightly to the South of Glenemma).

The third reserve, Sicamous I.R. 3 (on the West shore of Mara Lake, slightly to the South of Sicamous, C.P. Station), is currently unpopulated.

f.22. Secwepemctsin Language

The 2013 comprehensive community plan identified earlier also identifies the Secwepemctsin language as being of concern, and outlines some goals for how to increase language acquisition to support cultural continuity (Splatsin 2013:52).

> *Our culture and language link us with our ancestors and they define who we are. Our culture applies to every aspect of our lives, our lifestyles, ceremonies, customs, rituals, and most importantly, our values. Through living with respect, generosity, and sharing, we connect with our traditional beliefs, giving us a sense of belonging and a spiritual foundation. Our language expresses the richness of our culture and by learning the language, we gain a better understanding of our history and our values (Splatsin 2013:51).*

Community planning to revitalize the Secwepemc language is timely. According to government statistics regarding knowledge of Indigenous languages among on-reserve Splatsin populations, speaking Secwepemctsin appears to be decreasing. For example, in 2006 33.3% of the population was identified as having knowledge of an Aboriginal language, while in 2011 only 15.4% did. See **Table 19**.

Table 19: Language Statistics For Splatsin On-reserve, 2011.

	Male	Female	Total
Language Knowledge	220	230	455
Aboriginal language(s)	30	40	70
Pop. with Aboriginal languages first learned (%)	6.8	10.9	8.8
Pop. with Aboriginal spoken at home (%)	9.1	13	9.9
Pop. with knowledge of Aboriginal lang. (%)	13.6	17.4	15.4

Source: IANAC. 2016

f.23. On-reserve Age Characteristics

Table 20 outlines the age characteristics for the on-reserve population (i.e., all persons living on Splatsin reserves, regardless of whether they are a band member or not) and compares the age categories to the larger North Okanagan Regional District. As highlighted, the on-reserve Splatsin population has a much higher share of its population in the under 19-years of age category than observed in the North Okanagan Regional District. In addition, the Splatsin on-reserve population is made up of a much smaller share of population over the age of 65 years than seen in the larger region.

Table 20: Splatsin On-reserve Age Characteristics and Comparison with North Okanagan Regional District, 2011.

	Splatsin				North Okanagan RD
	Male	**Female**	**Total**	**% Share**	**% Share**
Total All persons	220	235	455	100.0%	100.0%
Age 0-19	85	75	160	35.2%	21.3%
Age 20-64	115	135	250	54.9%	57.7%
Age 65 and over	20	25	45	9.9%	21.0%
Median Age	35.6	36.1	35.8		47.2

Source: IANAC. 2016 and Statistics Canada. 2016b.

The median age of people living on Splatsin reserves (as of 2011) is 35.8 years-old, as compared to the median age of the North Okanagan Regional District, which has a median age of 47.2 years.

f.24. On-reserve Household Characteristics

Table 21 highlights the household characteristics of the on-reserve housing for the Splatsin. As illustrated, approximately 44% of households are couple families. This is smaller share than observed for the larger North Okanagan Regional District. In addition, the share of lone parent families is much higher than in the larger region. The median household income for Splatsin on-reserve was $30,006 compared to $53,647 for the larger Region.

Table 21: Splatsin On-reserve Household Characteristics and Comparison with North Okanagan Regional District, 2011.

	Splatsin		North Okanagan RD
	#	**% Share**	**% Share**
Total - All private households	170	100.0%	100.0%
One family households	110		
Couple family households	75	44.1%	56.8%
Female lone parent households	30	17.6%	8.3%
Male lone parent households	10	5.9%	2.4%
Multi-family households	0	0.0%	1.6%
Non-family households	55	32.4%	31.0%
Median household income ($)	$30,006		$53,647

Source: IANAC. 2016 and Statistics Canada. 2016b.

f.25. On-reserve Education Attainment

Of the 455 residents (including Splatsin members and other residents) living on-reserve in 2011, 325 were over 15 years of age (i.e. employable). **Table 22** summarizes the educational attainment of these residents and highlights the high number of both males and females who have obtained trades and apprenticeships or other non-university certificates. In fact, Splatsin on-reserve population is twice the rate observed at the larger North Okanagan Regional District.

Table 22: Splatsin On-reserve Education Attainment and Comparison to the North Okanagan Regional District, 2011.

	Splatsin				North Okanagan RD
Highest Degree or Certificate	**Male**	**Female**	**Total**	**% Share of Total**	**% Share of Total**
No degree, certificate or diploma	50	60	110	33.8%	19.6%
High school diploma or equivalent only	45	55	100	30.8%	29.8%
Trades/apprenticeship or other non-university certificate	50	45	95	29.2%	14.4%
University certificate below bachelor level	0	10	10	3.1%	23.7%
University degree (bachelor level or higher)	0	10	10	3.1%	12.5%
Population 15 years and over	145	180	325	100.0%	100.0%

Source: IANAC. 2016 and Statistics Canada. 2016b.

f.26. On-reserve Experienced Labour Force

Table 23 outlines the percentage shares of the on-reserve Splatsin experienced labour force and compares these percentage shares with the larger North Okanagan Regional District. As illustrated, there is a large share of the Splatsin on-reserve experienced labour force in wholesale and retail, and manufacturing and construction. Unfortunately, the low reliability of the National Household Survey in 2011 has resulted in Statistics Canada allocating a large portion of the labour force to other services, which includes a wide range of activities including, arts, entertainment and recreation; public administration; and, accommodation and food services.

Table 23: Splatsin On-reserved Experienced Labour Force and Comparison to North Okanagan Regional District, 2011.

	Splatsin	North Okanagan RD
Population 15 years and over	325	40,125
Agriculture, resource based	7.5%	8.6%
Manufacturing, construction	15.0%	18.3%

	Splatsin	North Okanagan RD
Wholesale, retail	17.5%	18.7%
Finance, real estate	0.0%	4.4%
Health, education	12.5%	18.0%
Business services	5.0%	9.7%
Transportation, warehousing	5.0%	3.9%
Other services	37.5%	18.4%
Total	100.0%	100.0%

Source: IANAC. 2016 and Statistics Canada. 2016b.

f.27. On-reserve Labour Force Participation

The 2011 census data for the Splatsin reserve populations shows that almost 30% of the employable population is unemployed. In addition, the unemployment rate is much higher for on-reserve males (37.5%) compared to females (22.2%). When compared to the North Okanagan Regional District, the Splatsin on-reserve population has a much higher unemployment rate.

Table 24: Splatsin On-reserve Labour Force Participation and Comparison to North Okanagan Regional District, 2011

	Splatsin			North Okanagan RD		
Labour Force Indicators	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
Participation rate (%)	51.6%	51.4%	52.3%	64.7%	55.2%	59.7%
Employment rate (%)	32.3%	40.0%	38.5%	58.1%	50.5%	54.1%
Unemployment rate (%)	37.5%	22.2%	29.4%	10.2%	8.5%	9.4%

Source: IANAC. 2016 and Statistics Canada. 2016b.

Simpcw

f.28. Data Quality

Much of the data used in this section is referenced from the Indigenous and Northern Affairs Canada First Nation Profiles and is derived from Statistics Canada data sources. The Statistics Canada Census data can be challenged in accuracy when representing smaller population. In addition, there has been challenges in obtaining accurate numbers for First Nation community over past Census periods.

Furthermore, a unique challenge emerged for the 2011 Census when the Federal Government abandoned the long-form Census and replaced it with the National Household Survey (NHS). Given the low response rate, this creates challenges for the accuracy of data such as education, experienced labour force, labour force participation, and personal and household income data for communities with smaller populations.

Specifically, for the 2011 NHS estimates, the global non-response rate (GNR) is used as an indicator of data quality. This indicator combines complete non-response (household) and partial non-response (question) into a single rate. The value of the GNR is presented to users. A smaller

GNR indicates a lower risk of non-response bias and as a result, lower risk of inaccuracy. The threshold used for the estimates' suppression is a GNR of 50% or more. For the Simpcw main populated reserve, the GNR was 20.8% (Statistics Canada. 2016a).

Issues with relying on Census data to represent First Nation communities is that often 50% or more of the member Band population does not reside on the home reserves. In the case of the Simpcw, 471 members or 66% of the total population resides off-reserve. Finally, there will be a number of non-Band members residing on-reserve who will be included in the Census and NHS data. The larger the non-Band resident presence, the more difficult it can be to determine the population characteristics of the on-reserve Simpcw population.

f.29. Overview

Simpcw is a northern division of the larger Secwempc Nation, and as such has for millennia occupied the North Thompson River watersheds and tributary drainages, from south of present day McClure, and well north above the headwaters of the Fraser River, from Tete Jaune Cache to Goat River, east through the Yellowhead Pass to Jasper and south through the Kinbasket and watersheds of the Athabasca River, with western boundaries in the Wells and Caribou Mountains, and central Plateau Lakes country.

Evidence of Simpcwemc ancestral and continuous occupation of Simpcwul’ecw is found in the archaeological record, which supports the oral histories and inherited knowledge of Simpcwemc, through the use of c [7]-istkten, or semi-winter homes, and attendant food and fur cache sites at a variety of upper and lower elevations throughout Simpcwul’ecw, including those sites joined by well known trails networks between Pesqlélten (Finn Creek), Tska [7] (Tum Tum), and the Canoe River Corridor, now lying beneath the Kinbasket and Revelstoke Reservoirs.
While seasonally and selectively relying on salmon and lake fish, Simpcwemc are also historically observed to render a good living from trapping and hunting and were renowned for their ability conduct successful game harvest on all elevations, particularly in the carefully orchestrated pursuit of Mountain caribou, in the Wells/Caribou, Upper Fraser and Canoe/Kinbasket/Columbia watersheds and ranges.

Technologies specifically designed for such harvests included complex riverine weir and net systems and spearing for salmon, harpooning and dragging for sturgeon, ice-fishing and pitch-lamping for lake fish, snares for deer and small game, dead-fall traps for bear, and corral and wing systems for caribou and elk. Plant product harvest, which took place during most of the year, required intergenerational expertise, and intimate knowledge of regional ecosystems and species distribution. Equally complex harvest processing (including hide removal and tanning, meat butchering, portioning and smoking/drying) and base camp and transport systems, and a reliance on migratory game gave rise to some regional variation from other Secwepemc, in Simpcwemc dress, diet and inherited knowledge.

However, it is the ancient and continuous Simpcwemc use of the Northern Secwepemc linguistic dialect, expansive and inter-ethnolinguistic Simpcwemc trade and commerce networks and relations, that distinguish Simpcwemc from other groups in the Secwepemc nation. Simpcw provided an intermediary trade conduit between Eastern Slope sources and markets, and those of

the Plateau, long prior to but particularly in the (regional) proto-contact and early contact periods (1780's-1830's).

On the whole, Simpcwemc traders and travelers maintained consistently and mutually beneficial relations with external groups, as well as with other Secwepemc, but Simpcw was not without the capacity to defend Simpcwul'ecw when the occasion arose. For example, in a carefully orchestrated, Simpcw-led confederacy involving individuals from other Secwepemc communities, responding to the call to arms around 1789-90, a group of homeless Sekani who had been squatting and pilfering in northern Simpcwul'ecw were soundly expelled and largely exterminated, never to return.

Today, Simpcw's First Nation's Community Planning Report (Simpcw FN 2015a) includes a continued focus on its Title and Rights research, which considers landmark court case decisions and outcomes, clarifying and verifying archival and externally produced observations of Simpcwemc and Simpcwul'ecw, and improving the electronic storage and recall of its expansive collection of cultural source materials.

> *"First Nations people know that humans are part of the environment. We are not separate from it and so what we do to the environment—to support it, or harm it—we do to ourselves. Our ancestors planned and acted in a way that ensured our livelihood, clean water, air, forests, plants, fish and animals. It is our responsibility as the current generation to learn from our past and plan for our future so that current decisions reflect long-term sustainability. The impact of our decisions and actions on the environment is not an 'add-on' for review but must be a core component. To remind us of this and to bring it to the forefront of our minds, a priority CCP goal is 'to maintain healthy land and water for future generations by bringing environmental responsibility and respect into all our decisions.'" (Simpcw FN 2015a:25, section 5.1.3).*

Simpcwul'ecw (Simpcw Territory), described by Teit (1909) and Marianne Ignace (1998) includes a large portion of the Adams Lake and all of the Upper Adams River. Teit and Ignace name it the North Thompson Division, which includes the Kinbasket, the Upper North Thompson Band (Upper Fraser and Robson River Valleys, Jasper, Big Bend[21] of the Columbia as described above) and the Lower North Thompson Band (which at that time included the

[21] George Simpson's Journals refer to Simpcw's ancestors being in the Big Bend area in 1824 (Merk 1931:30, see also Robertson 2009:18): "…were preparing to go on a War Expedition [1824] against a poor helpless inoffensive tribe of Indians "Shewhoppes", natives of the North branch of Thompsons River knowing them to be weak and unprovided with the means of defense and solely with a view to plunder and gain themselves renown as Warriors by taking a few Scalps without incurring danger...I have been anxious to encourage those Indians to frequent the Establishment in the Mountain [Rocky Mountain House, according to the Merk footnote] in order to draw them from Thompsons River as in the event of their being prevailed on to go the former place for their supplies and with their returns we should be enabled to abandon that heavy and unprofitable Establishment [Fort Thompson, according to a Merck footnote] for a Year or two, but this unprovoked warfare was likely to defeat my plans; on the score of humanity as well of interest. I therefore spoke my Mind very plainly to those freemen, told them we meant to protect the Shewhoppes and if they did not instantly abandon their cruel intentions they should not this Winter have even a particle of ammunition at any of our Establishments and that next Season they should be bundled down to Canada where starvation & misery would follow them. This lecture had the desired effect and they promised that they would no longer entertain hostile feelings towards those people. Those freemen are fully in our power and if they break their promise I shall keep my word in regard to them."

current Canim Lake Indian Band)—formerly known as Canoe Lake—reserves established 4 years after the Teit map in 1913: Zacharias 1992, see Figure 2, DIA 1891 below), and the current Simpcw/NTIB reserves, established 1877 (UBCIC 2016). Shuswap Band was established at Windemere in 1884 they arrived in that area in 1840s (Evans 2009).

f.30. Simpcw Population

Simpcw has a registered population of 718 persons in November 2016. This number includes members living on and off reserve. Within this population, 220 members are living on-reserve at two of Simpcw's five reserves.

Table 25: Simpcw Population By Residency, November 2016

	# of People		
	Male	**Female**	**Total**
Registered On Own Reserve	110	110	220
Registered On Other Reserves	14	13	27
Registered Off Reserve	216	255	471
Total Registered Population	340	378	718

Source: IANAC. 2016

f.31. Secwepemctsin Language

Table 26 outlines the language knowledge reported in the 2011 Census for the on-reserve population of the Simpcw First Nation.

Table 26: Language Statistics for Simpcw On-reserve, 2011

	Male	**Female**	**Total**
Language Knowledge	135	125	260
Aboriginal language(s)	n/a	n/a	15
Pop. with Aboriginal languages first learned (%)	7.4	12	5.8
Pop. with Aboriginal spoken at home (%)	n/a	n/a	3.8
Pop. with knowledge of Aboriginal lang. (%)	n/a	n/a	5.8

Source: IANAC. 2016

f.32. On-reserve Age Characteristics

Table 27 outlines the age characteristics for the on-reserve population (i.e., all persons living on Simpcw reserves, regardless of whether they are a band member or not) and compares the age categories to the larger Thompson Nicola Regional District. As highlighted, the on-reserve Simpcw population has a much higher share of its population in the under 19-years of age category than observed in the larger Thompson Nicola Regional District.

Table 27: Simpcw On-reserve Age Characteristics and Comparison with Thompson Nicola Regional District, 2011.

	Simpcw				Thompson Nicola RD
	Male	**Female**	**Total**	**% Share**	**% Share**
Age 0-19	40	40	80	30.8%	21.7%
Age 20-64	85	75	160	61.5%	61.3%
Age 65 and over	10	10	20	7.7%	17.0%
Total All persons	135	125	260	100.0%	100.0%
Median Age	36.7	44.6	39.1		44.0

Source: IANAC. 2016 and Statistics Canada. 2016b.

The median age of Simpcw members living on-reserve in 2011was 39.1 years-old (as compared to the median age of the Thompson Nicola Regional District of 44.0 years).

f.33. On-reserve Household Characteristics

Table 28 highlights the household characteristics of the on-reserve housing for the Simpcw. As illustrated, approximately 48% of households are couple families, this is similar to the larger Thompson Nicola Regional District. Simpcw median household income has increased from 31,552 in 2006 to $40,895 in 2011, an increase of almost 30%. However, the median household income of the Simpcw on-reserve of $40,895 still lags the rate of $59,385 observed for the larger Region.

Table 28: Simpcw On-reserve Household Characteristics and Comparison with Thompson Nicola Regional District, 2011

	Male	**Female**	**Total**
Language Knowledge	135	125	260
Aboriginal language(s)	n/a	n/a	15
Pop. with Aboriginal languages first learned (%)	7.4	12	5.8
Pop. with Aboriginal spoken at home (%)	n/a	n/a	3.8
Pop. with knowledge of Aboriginal lang. (%)	n/a	n/a	5.8

Source: IANAC. 2016 and Statistics Canada. 2016b.

f.34. On-reserve Education Attainment

Of the 260 residents (including Simpcw members and other residents) living on-reserve in 2011, 200 were over 15 years of age (i.e. employable). **Table 29** summarizes the educational attainment of these residents and highlights the high number of both males and females who have obtained trades and apprenticeships or other non-university certificates and has a rate that is much higher than observed at the larger Thompson Nicola Regional District.

Table 29: Simpcw On-Reserve Education Attainment Comparison to the Thompson Nicola Regional District, 2011.

	Simpcw				Thompson Nicola RD
	Male	**Female**	**Total**	**% Share**	**% Share**
Age 0-19	40	40	80	30.8%	21.7%
Age 20-64	85	75	160	61.5%	61.3%
Age 65 and over	10	10	20	7.7%	17.0%
Total All persons	135	125	260	100.0%	100.0%
Median Age	36.7	44.6	39.1		44.0

Source: IANAC. 2016 and Statistics Canada. 2016b.

f.35. On-reserved Experienced Labour Force

Table 30 outlines the percentage shares of the on-reserve Simpcw experienced labour force and compares these percentage shares with the larger Thompson Nicola Regional District. As illustrated, there is a large share of the Simpcw on-reserve experienced labour force in wholesale and retail, and manufacturing and construction. Unfortunately, the low reliability of the National Household Survey in 2011 has resulted in Statistics Canada allocating a large portion of the labour force to other services, which includes a wide range of activities including, arts, entertainment and recreation; public administration; and, accommodation and food services.

Table 30: Simpcw On-reserve Experienced Labour Force and Comparison to Thompson Nicola Regional District, 2011.

	Simpcw	Thompson Nicola RD
Population 15 years and over	205	67,415
Agriculture, resource based	14.8%	8.9%
Manufacturing, construction	11.1%	14.0%
Wholesale, retail	0.0%	16.2%
Finance, real estate	0.0%	4.2%
Health, education	22.2%	20.3%
Business services	0.0%	8.7%
Transportation, warehousing	0.0%	6.1%
Other services	51.9%	21.6%
		100.0%

Source: IANAC. 2016 and Statistics Canada. 2016b.

f.36. On-reserve Labour Force Participation

The 2011 census data for the Simpcw reserve populations shows that 23% of the employable population is unemployed. This is much higher than the larger Thompson Nicola Regional District. When compared to the Thompson Nicola Regional District, the Simpcw on-reserve population does not enjoy the same level of employment participation as the larger region.

Table 31: Simpcw On-reserve Labour Force Participation and Comparison to Thompson Nicola Regional District, 2011.

	Simpcw			Thompson Nicola RD		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**
Participation rate	63.6%	63.2%	63.4%	66.5%	60.4%	63.4%
Employment rate	40.9%	57.9%	48.8%	59.5%	55.3%	57.3%
Unemployment rate	28.6%	n/a	23.1%	10.5%	8.6%	9.6%

Source: IANAC. 2016 and Statistics Canada. 2016b.

Kenpesq't (Shuswap Band)

f.37. Data Quality

Much of the data used in this section is referenced from the Indigenous and Northern Affairs Canada First Nation Profiles and is derived from Statistics Canada data sources. The Statistics Canada Census data can be challenged in accuracy when representing smaller population. In addition, there have been issues in obtaining accurate numbers for First Nation community over past Census periods.

Furthermore, a unique challenge emerged for the 2011 Census when the Federal Government abandoned the long-form Census and replaced it with the National Household Survey (NHS). Given the low response rate, this creates challenges for the accuracy of data such as education, experienced labour force, labour force participation, and personal and household income data for communities with smaller populations.

Specifically, for the 2011 NHS estimates, the global non-response rate (GNR) is used as an indicator of data quality. This indicator combines complete non-response (household) and partial non-response (question) into a single rate. The value of the GNR is presented to users. A smaller GNR indicates a lower risk of non-response bias and as a result, lower risk of inaccuracy. The threshold used for the estimates' suppression is a GNR of 50% or more. For the Kenpesq't main populated reserve, the GNR was 12.2% (Statistics Canada. 2016a).

Issues with relying on Census data to represent First Nation communities is that often 50% or more of the member Band population does not reside on the home reserves. In the case of the Kenpesq't, 85 members or 32% of the total population reside on Kenpesq't reserves. Finally, there will be a number of non-Band members residing on-reserve who will be included in the

Census and NHS data, the larger the non-Band resident presences the more difficult it can be to determine the population characteristics of the on-reserve Kenpesq't population.

f.38. Overview

The past location of the Shuswap Band is North of the current reserve communities. Teit describes the migration of Chief Kenpésket and his people, which had taken place about 65 years earlier (so approximately 1844): "[Chief Kenpésket] …who, with fifty or sixty friends, mostly members of the same division migrated to the head of the Columbia River, on the confines of the Kootenai tribe. Kenpésket and some of his followers had often been in that region on hunting-trips, and knew the country well. They made the trips mostly with canoes by way of Canoe River; and on arriving at their destination, they made an alliance with the Stony Indians of the Rocky Mountains." (Teit 1909:467). The alliance between the Kinbasket and the Stony has been described, and it is identified that the Kinbasket always did use the area they now inhabit, so this really was not a change in Territory, just utilization (LeBourdais 2009:13-14).

Today, Shuswap members who live on Shuswap reserves are located near the Columbia River near the communities of Invermere and Cranbrook. The Columbia is very important to Shuswap ways of life, one of the primary goals of the Kenpesq't is to see salmon return to the Upper Columbia. The Kenpesq't sees this return as fundamental to regaining their cultural-spiritual connection to the land.

The Kenpesq't's Traditional Use Study is currently under review by the Band members (Shuswap Indian Band 2008). In it, they characterize their history and culture as follows:

> *The Kenpesq't, or Shuswap Indian Band, is a member of the Secwépemc (Shuswap) Nation, an interior Salish speaking people who traditionally occupied a vast area in the south-central part of British Columbia, Canada … The traditional territory of the Shuswap Indian Band centres on the Upper Columbia Valley and mountain ranges but has no precise boundaries … (Shuswap Indian Band 2008:xv-xviii).*

Shuswap has partnerships with a number of business in the area (e.g. Akisqnuk First Nation ANKORS BC Hydro Canadian Mental Health Association, Canadian Mountain Holidays, Columbia Basin Trust, Corix, Dr. Michael Baker, Family Dynamix, First Nations Health Authority, Home Hardware, Interior Health, Invermere Royal Canadian Mounted Police, Ktunaxa Nation, Regional District of East Kootenay, Rising Sun Massage & Spa, Sobey's, Urban Systems) (Shuswap 2016). The Kinbasket Development Corporation generates income for the Kenpesq't through partnerships. Kenpesq't's CCP (May 2016) identifies tourism as an area for future economic growth (Shuswap Band and Urban Systems 2016:15). The CCP also outlines existing Secwepemc language initiatives and prioritizes future language revitalization efforts (Shuswap Band and Urban Systems 2016:18).

Shuswap I.R., in addition to the band office, is the location of the new health centre, which was opened in 2015. The centre provides medical services and additional health resources, such as the Healthy Food Box program. Participation in traditional Secwepemc lifeways, such as harvesting traditional foods and medicines, contribute to both the dietary health and positive mental health of the community, as identified throughout this report.

Kenpesq't is a member of the Shuswap Nation Tribal Council, and the Ktunaxa Kinbasket Tribal Council.

f.39. Kenpesq't Population

Kenpesq't has a registered population of 264 persons in November 2016. This number includes members living on- and off-reserve. Within this population: 85 members are living on Shuswap I.R. (on the Columbia River, slightly to the North of Invermere). In addition, there are 33 members living on non-Shuswap reserves, and 146 members living off-reserve.

Table 32: Kenpesq't Population By Residency, November 2016.

	Male	Female	Total
Registered On Own Reserve	45	40	85
Registered On Other Reserves	15	18	33
Registered Off Reserve	68	78	146
Total Registered Population	128	136	264

Source: IANAC. 2016.

f.40. Secwepemctsin Language

According to government statistics regarding knowledge of Indigenous languages among on-reserve Kenpesq't population, speaking Secwepemctsin may or may not be increasing. In 2011, 3.4% identified as speaking and Aboriginal language in the home, as compared to 0% in 2006; however, the percentage decreased regarding Aboriginal language first learned prior to another language (e.g. English), see **Table 33**.

Table 33: Language Statistics for Kenpesq't On-reserve, 2011

	Male	Female	Total
Language Knowledge	160	130	290
Aboriginal language(s)	10	10	20
Pop. with Aboriginal languages first learned (%)	6.3	0	3.4
Pop. with Aboriginal spoken at home (%)	0	0	3.4
Pop. with knowledge of Aboriginal lang. (%)	6.3	7.4	3.4

Source: IANAC. 2016

f.41. On-reserve Age Characteristics

Table 34 outlines the age characteristics for the on-reserve population (i.e., all persons living on Kenpesq't reserves, regardless of whether they are a band member or not) and compares the age categories to the larger East Kootenay Regional District. As highlighted, the on-reserve Kenpesq't population has a similar share of its population in the under 19-years of age category with that observed in the larger East Kootenay Regional District. The Kenpesq't on-reserve population has a slightly smaller percentage share in the over 65-year age category when compared to the larger Region. The median age of people living on Kenpesq't reserves (as of 2011) is 36.7 years-old (as compared to the median age of the East Kootenay Regional District of 44.5 years of age.

Table 34: Kenpesq't On-reserve Age Characteristics and Comparison with East Kootenay Regional District, 2011.

	Kenpesq't				East Kootenay
	Male	**Female**	**Total**	**% Share**	**% Share**
Age 0-19	45	25	70	23.7%	21.8%
Age 20-64	95	90	185	62.7%	61.6%
Age 65 and over	20	20	40	13.6%	16.6%
Total All persons	160	135	295	100.0%	100.0%
Median Age	33.1	39.6	36.7		44.5

Source: IANAC. 2016 and Statistics Canada. 2016b.

f.42. On-reserve Household Characteristics

Table 35 highlights the household characteristics of the on-reserve housing for the Kenpesq't. As illustrated, approximately 63% of households are couple families, this is higher than the larger East Kootenay Regional District.

Table 35: Kenpesq't On-reserve Household Characteristics and Comparison with East Kootenay Regional District, 2011.

	Kenpesq't		East Kootenay
	#	**% Share**	**% Share**
Total - All private households	120	100.0%	100.0%
One family households	80		
Couple family households	75	62.5%	60.1%
Female lone parent households	10	8.3%	6.6%
Male lone parent households	0	0.0%	2.3%
Multi-family households	0	0.0%	1.0%
Non-family households	35	29.2%	30.0%

	Kenpesq't		East Kootenay
	#	% Share	% Share
Median household income ($)	47,902		$66,049

Source: IANAC. 2016 and Statistics Canada. 2016b.

Kenpesq't median household income was $47,902 in 2011; this was below the larger East Kootenay Region that had a median household income of $66,049.

f.43. On-reserve Education Attainment

Of the 295 residents (including Kenpesq't members and other residents) living on-reserve in 2011, 240 were over 15 years of age (i.e. employable). Table 36 summarizes the educational attainment of these residents and highlights the high number of both males and females who have obtained trades and apprenticeships or other non-university certificates.

Table 36: Kenpesq't On-Reserve Education Attainment Comparison to the East Kootenay Regional District, 2011.

	Kenpesq't				East Kootenay RD
	Male	Female	Total	% Share of Total	% Share of Total
No degree, certificate or diploma	45	20	65	27.1%	18.6%
High school diploma or equivalent only	35	45	80	33.3%	28.0%
Trades/apprenticeship or other non-university certificate	35	30	65	27.1%	15.8%
University certificate below bachelor level	0	10	10	4.2%	23.8%
University degree (bachelor level or higher)	10	10	20	8.3%	13.9%
Population 15 years and over	125	115	240	100.0%	100.0%

Source: IANAC. 2016 and Statistics Canada. 2016b.

f.44. On-reserved Experienced Labour Force

Table 37 outlines the percentage shares of the on-reserve Kenpesq't experienced labour force and compares these percentage shares with the larger East Kootenay Regional District. As illustrated, there is a large share of Kenpesq't on-reserve experienced labour force in wholesale and retail, and manufacturing and construction.

Table 37: Kenpesq't On-reserve Experienced Labour Force and Comparison to East Kootenay Regional District, 2011.

	Kenpesq't	East Kootenay RD
Population 15 years and over	240	30,675
Agriculture, resource based	5.6%	13.8%
Manufacturing, construction	16.7%	14.3%

	Kenpesq't	East Kootenay RD
Wholesale, retail	11.1%	14.7%
Finance, real estate	5.6%	5.6%
Health, education	8.3%	16.8%
Business services	11.1%	8.8%
Transportation, warehousing	5.6%	3.8%
Other services	36.1%	22.2%
Total	100.0%	100.0%

Source: IANAC. 2016 and Statistics Canada. 2016b.

Unfortunately, the low reliability of the National Household Survey in 2011 has resulted in Statistics Canada allocating a large portion of the labour force to other services, which includes a wide range of activities including, arts, entertainment and recreation; public administration; and, accommodation and food services.

f.45. On-reserve Labour Force Participation

The 2011 census data for the Kenpesq't reserve populations shows that just over 9% of the employable population is unemployed. This is only slightly higher than the rate at the larger East Kootenay Regional District level.

Table 38: Kenpesq't On-reserve Labour Force Participation and Comparison to Thompson Nicola Regional District, 2011.

	Kenpesq't			East Kootenay RD		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**
Participation rate	72.0%	60.9%	68.8%	71.8%	59.8%	65.8%
Employment rate	68.0%	56.5%	62.5%	66.3%	56.0%	61.2%
Unemployment rate	n/a	n/a	9.1%	7.8%	6.3%	7.1%

Source: IANAC. 2016 and Statistics Canada. 2016b.

Sqw'lax [Little Shuswap Lake]

f.46. Data Quality

Much of the data used in this section is referenced from the Indigenous and Northern Affairs Canada First Nation Profiles and is derived from Statistics Canada data sources. The Statistics Canada Census data can be challenged in accurately when representing smaller population. In addition, there have been challenges in obtaining accurate numbers for First Nation community over past Census periods.

Furthermore, a unique challenge emerged for the 2011 Census when the Federal Government abandoned the long-form Census and replaced it with the National Household Survey (NHS). Given the low response rate, this creates challenges for the accuracy of data such as education, experienced labour force, labour force participation, and personal and household income data for communities with smaller populations.

Specifically, for the 2011 NHS estimates, the global non-response rate (GNR) is used as an indicator of data quality. This indicator combines complete non-response (household) and partial non-response (question) into a single rate. The value of the GNR is presented to users. A smaller GNR indicates a lower risk of non-response bias and as a result, lower risk of inaccuracy. The threshold used for the estimates' suppression is a GNR of 50% or more. For the Skw'lax main populated reserve, the GNR was 34.4% (Statistics Canada. 2016a).

Issues with relying on Census data to represent First Nation communities is that often 50% or more of the member Band population does not reside on the home reserves. In the case of the Skw'lax, 85 members or 34.4% of the total population reside on Skw'lax reserves. Finally, there will be a number of non-Band members residing on-reserve who will be included in the Census and NHS data. The larger the non-Band resident presences the more difficult it can be to determine the population characteristics of the on-reserve Skw'lax population.

f.47. Overview

The members of Skw'lax who are living on-reserve, live near Shuswap Lake and Little Shuswap Lake, near the South Thompson River, with additional reserves in proximity to Chum and Philips Lakes.

On their website, Skw'lax describes themselves this way:

> *To the people of the Little Shuswap it's known at Skw'lax. The settlers could not say the Shuswap name so it is known today as Squilax. Skw'lax in the Shuswap language is known as black bear.*
>
> *Whether you are travelling through on vacation or planning to stay with us awhile, we know you will agree that truly we have the "Land of the Great Spirit." From the snow-capped mountains to the panoramic view of the Shuswap Lake, the natural scenic wonders will leave you breathless and yearning to return once more.*
>
> *A limited amount of hunting on the reservation has preserved the abundance of wildlife in their pristine environment. Campgrounds amid the pines are easily reached, minutes from the main highways. Most of the recreational areas are especially scenic with excellent fishing close at hand. The flora and fauna of the Little Shuswap are a photographer's dream.*
>
> *With all that we have to offer, we ask that you come... come visit us... come stay with us... all that we ask is that you treat the land and the people with respect. This is our home for the short time that we are here on Mother Earth, but it is the home of the great spirit for eternity.*

Currently, Skw'lax has various commercial ventures, which contribute to the economy. In addition to leasing opportunities, the community operates Skw'lax Centre (which includes a gas station in close proximity to Little Shuswap Lake for car and boat fueling), Skw'lax Air Strip (which allows helicopter landing), and Quaaout Lodge and Spa which also features Talking Rock Golf Course on the same property (Little Shuswap Lake Indian Band 2016). The lodge and golf course attract international clientele to the area. The lodge is situated on Quaaout I.R. 1. Signage and examples, explaining traditional Secwepemc subsistence and ceremonial practices, are featured around the property in order to educate visitors.

Daily tours are also offered to explain the cultural practices illustrated on around the lodge and golf resort (Quaaout Lodge 2016). In 2015 Skw'lax completed a comprehensive community plan which encourages economic development as a means to increase the self-sufficiency of the Skw'lax community (Urban Systems 2015:17).

The community plan also highlights cultural concerns, such as keeping the Secwepemctsin language strong (Urban Systems 2015:8). In 1987 concerned parents from Skw'lax, along with Sexqeltqin and Neskonlith Bands worked together to start the language revitalization program which lead to the creation the Secwepemctsin immersion school in 1991 on an Adams Lake Indian Band reserve (T'selcéwtqen Clleqmél'ten, Chief Atahm School website 2016).

Quaaout I.R. 1 is situated on Little Shuswap Lake and is a hub for tourism initiatives. Additionally, a number of community buildings, including Skw'lax Daycare and the Skw'lax Wellness Centre, are located there. The Wellness Centre meets community needs for medical health as well as employment services and social development support (such as activities for different age demographics e.g. children's summer camps and programming), (Little Shuswap Lake Indian Band 2016). North Bay I.R. 5 is also the location of a community hall, known locally as Tappen Hall.

Participation in traditional Secwepemc lifeways, such as harvesting traditional foods and medicines, contribute both to the dietary health and positive mental health of the community, as identified throughout this report.

Skw'lax is not a member of the Shuswap Nation Tribal Council.

f.48. Skw'lax Population

Skw'lax has a registered population of 349 in November 2016. Within this population: 196 members are living on-reserve on four of the Little Shuswap Lake's five reserves (Urban Systems 2015:22) including:

- Chum Creek I.R. 2 (on the south side of the South Thompson River at the end of Little Shuswap Lake);
- Meadow Creek I.R. 3 (slightly to the east of Chum Lake and slightly north of Phillips Lake);
- North Bay I.R. 5 (on the north shore of Salmon Arm on Shuswap Lake;
- The most popular reserve, Quaaout I.R. 1 (between Shuswap and Little Shuswap Lakes on the north side of the South Thompson River); and,

- Scotch Creek I.R. 4 (on the North Shore of Shuswap Lake), North of Scotch Creek.

In addition, there are 41 members living on non- Little Shuswap Lake reserves, and 112 members living off-reserve. The median age of people living on Skw'lax reserves (as of 2011) is 43.7 years old (as compared to the median age of the British Columbia population as a whole which is 41.6 years old.

Table 39: Skw'lax Population By Residency, November 2016.

	Male	Female	Total
Registered On Own Reserve	107	89	196
Registered On Other Reserves	22	19	41
Registered Off Reserve	61	51	112
Total Registered Population	190	159	349

Source: IANAC. 2016

f.49. Secwepemctsín Language

With ongoing community interest to learn Secwepemctsin, knowledge of the language may be increasing. In the other communities discussed in this report, where statistics are available for the 2006 and 2011 census reports, there has been an increase in knowledge of the Indigenous language on some reserves, whereas in other communities there has been a decrease. Statistics are not available for Little Shuswap Lake reserves from the 2006 census, so it is not known whether knowledge of the language is increasing, see the below 2011 statistics.

Table 40: Language Statistics for Skw'lax On-reserve, 2011

	Male	Female	Total
Language Knowledge	190	160	360
Aboriginal language(s)	35	30	65
Pop. with Aboriginal languages first learned (%)	5.3	6.3	6.9
Pop. with Aboriginal spoken at home (%)	15.8	12.5	13.9
Pop. with knowledge of Aboriginal lang. (%)	21.1	18.0	18.1

Source: IANAC. 2016

f.50. On-reserve Age Characteristics

Table 41 outlines the age characteristics for the on-reserve population (i.e., all persons living on Skw'lax reserves, regardless of whether they are a band member or not) and compares the age categories to the larger Thompson Nicola Regional District. As highlighted, the on-reserve Skw'lax population has a similar larger share of its population in the under 19-years of age category than observed in the Thompson Nicola Regional District. Skw'lax reserve population is

the only reserve to have a larger share of its population over the age of 65 years than in the larger Region.

Table 41: Skw'lax On-reserve Age Characteristics and Comparison with Thompson Nicola Regional District, 2011.

	Skw'lax				Thompson Nicola RD
	Male	**Female**	**Total**	**% Share**	**% Share**
Age 0-19	60	45	105	29.2%	21.7%
Age 20-64	100	90	190	52.8%	61.3%
Age 65 and over	35	30	65	18.1%	17.0%
Total All persons	195	165	360	100.0%	100.0 %
Median Age	43.3	43.9	43.7		44.0

Source: IANAC. 2016 and Statistics Canada. 2016b.

f.51. On-reserve Household Characteristics

Table 42 highlights the household characteristics of the on-reserve housing for the Skw'lax. As illustrated, approximately 43% of households are couple families, this is a lower share than the larger Thompson Nicola Regional District. In addition, the Skw'lax has a larger share of lone-parent families when compared to the Thompson Nicola Regional District.

Table 42: Skw'lax On-reserve Household Characteristics and Comparison with Thompson Nicola Regional District, 2011.

	Skw'lax		Thomspon Nicola RD
	#	**% Share**	**% Share**
Total - All private households	150	100.0%	100.0%
One family households	90		
Couple family households	65	43.3%	54.6%
Female lone parent households	20	13.3%	8.8%
Male lone parent households	10	6.7%	2.7%
Multi-family households	0	0.0%	1.8%
Non-family households	55	36.7%	32.1%
Median household income ($)	38,725		59,385

Source: IANAC. 2016 and Statistics Canada. 2016b.

Skw'lax median household income was $38,725 in 2011; this is noticeably lower than the $59,385 observed at the larger Thompson Nicola Region.

f.52. On-reserve Education Attainment

Of the 295 residents (including Skw'lax members and other residents) living on-reserve in 2011, 240 were over 15 years of age (i.e. employable). Table 44 summarizes the educational attainment of these residents and highlights the high number of both males and females who have obtained trades and apprenticeships or other non-university certificates. Skw'lax on-reserve population has a share that is twice the level observed at the larger Thompson Nicola Regional District.

Table 43: Skw'lax On-Reserve Education Attainment Comparison to the Thompson Nicola Regional District, 2011.

	Skw'lax				Thompson Nicola RD
	Male	**Female**	**Total**	**% Share of Total**	**% Share of Total**
No degree, certificate or diploma	60	30	90	31.6%	19.8%
High school diploma or equivalent only	35	45	80	28.1%	30.4%
Trades/apprenticeship or other non-university certificate	50	40	90	31.6%	14.1%
University certificate below bachelor level	5	10	15	5.3%	21.7%
University degree (bachelor level or higher)	10	0	10	3.5%	14.1%
Population 15 years and over	160	125	285	100.0%	100.0%

Source: IANAC. 2016 and Statistics Canada. 2016b.

f.53. On-reserved Experienced Labour Force

Table 44 outlines the percentage shares of the on-reserve Skw'lax experienced labour force and compares these percentage shares with the larger Thompson Nicola Regional District. As illustrated, there is a large share of the experienced labour force in manufacturing and construction.

Table 44: Skw'lax On-reserve Experienced Labour Force and Comparison to Thompson Nicola Regional District, 2011.

	Skw'lax	Thompson Nicola RD
Population 15 years and over	285	67,415
Agriculture, resource based	6.3%	8.9%
Manufacturing, construction	9.4%	14.0%
Wholesale, retail	6.3%	16.2%
Finance, real estate	6.3%	4.2%
Health, education	6.3%	20.3%
Business services	0.0%	8.7%

Transportation, warehousing	6.3%	6.1%
Other services	59.4%	21.6%
Total	100.0%	100.0%

Source: IANAC. 2016 and Statistics Canada. 2016b.

Unfortunately, the low reliability of the National Household Survey in 2011 has resulted in Statistics Canada allocating a large portion of the labour force to other services, which includes a wide range of activities including, arts, entertainment and recreation; public administration; and, accommodation and food services.

f.54. On-reserve Labour Force Participation

The 2011 census data for the Skw'lax reserve populations shows that 17.9% of the employable population is unemployed, as shown in **Table 45**. This is higher than the rate at the larger Thompson Nicola Regional District level.

Table 45: Skw'lax On-reserve Labour Force Participation and Comparison to Thompson Nicola Regional District, 2011.

	Male	**Female**	**Total**	**Male**	**Female**	**Total**
Participation rate	50.0%	48.0%	9.1%	66.5%	60.4%	63.4%
Employment rate	40.6%	36.0%	0.4%	59.5%	55.3%	57.3%
Unemployment rate	12.5%	25.0%	7.9%	10.5%	8.6%	9.6%

Source: IANAC. 2016 and Statistics Canada. 2016b.

Aboriginal Population in the Shuswap Area

f.55. Study Area Overview

As mentioned above, a large share of First Nations membership resides off reserve. It is believed that many live in the larger regions surrounding their reserve lands. The following uses Statistic Canada data to gain insight into the socio-economic characteristics of those identifying themselves as aboriginal in the 2011 Census. It is unknown what share of those identifying themselves of aboriginal ancestry are Secwepemc.

The Shuswap Area is made up of Columbia Shuswap Regional District (CSRD) Electoral Areas, B, C, D, E, F and the municipalities of Revelstoke, Sicamous, Salmon Arm, and Chase.

f.56. Aboriginal Identity in Shuswap Area

Table 46 highlights the Aboriginal identity in the Shuswap Area. As illustrated, 1,750 or 47% of the Aboriginal, population identifies themselves as First Nations.

Table 46: Aboriginal Identity in Shuswap Area, 2011

	#
First Nations (North American Indian) single identity	1,750
Métis single identity	1,815
Inuk (Inuit) single identity	50
Multiple Aboriginal identities	0
Aboriginal identities not included elsewhere	75
Total Aboriginal identity	**3,690**

Source: Statistics Canada. 2016d.

f.57. Shuswap Area Age Characteristics

Table 47 outlines the age characteristics for the First Nations population off-reserve in the Shuswap Area and compares the age categories to the larger CSRD. As highlighted, the off-reserve First Nation population is younger than the larger Region with the median age being 30.5 years compared to 48.1 in the CSRD.

Table 47: Aboriginal Age Characteristics and Comparison with Columbia Shuswap Regional District, 2011.

	Shuswap Area		**Columbia-Shuswap RD**
	Total	**% Share**	**% Share**
Age 0-19	1,445	39.2%	20.0%
Age 20-64	1,995	54.0%	59.2%
Age 65 and over	250	6.8%	20.8%
Total All persons	3,690	100.0%	100.0%
Median Age		30.5	48.1

Source: Statistics Canada. 2016c and Statistics Canada. 2016b.

f.58. Shuswap Area Education Attainment

Of the aboriginal residents in 2011, 3,690 were over 15 years of age (i.e. employable). **Table 48** summarizes the educational attainment of these residents and highlights the high number of Aboriginal residents who have obtained trades and apprenticeships or other non-university certificates when compared to the larger CSRD.

Table 48: Aboriginal Education Attainment Comparison to the Columbia-Shuswap Regional District, 2011.

	Shuswap Area	**Columbia-Shuswap RD**	
	Total	**% Share of Total**	**% Share of Total**
No degree, certificate or diploma	880	33.2%	19.9%
High school diploma or equivalent only	825	31.1%	28.9%
Trades/apprenticeship or other non-university	755	28.5%	16.4%

	Shuswap Area	Columbia-Shuswap RD	
	Total	% Share of Total	% Share of Total
certificate			
University certificate below bachelor level	95	3.6%	22.8%
University degree (bachelor level or higher)	95	3.6%	12.0%
Population 15 years and over	2,650	100.0%	100.0%

Source: Statistics Canada. 2016d and Statistics Canada. 2016b.

f.59. Shuswap Area Experienced Labour Force

Table 49 outlines the population identified as Aboriginal and the percentage shares of the experienced labour force and compares this with the larger CSRD. Overall, in the Shuswap Area almost 23% of the experienced labour force that identify themselves as Aboriginal are employed in manufacturing and construction.

Table 49: Aboriginal Experienced Labour Force and Comparison to Columbia-Shuswap Regional District, 2011.

	Shuswap Area	Columbia-Shuswap RD
Population 15 years and over	1,570	24,890
Agriculture, resource based	4.5%	9.2%
Manufacturing, construction	22.6%	18.5%
Wholesale, retail	22.6%	13.2%
Finance, real estate	0.0%	5.0%
Health, education	15.3%	17.6%
Business services	5.4%	8.1%
Transportation, warehousing	6.1%	6.9%
Other services	23.6%	21.4%
Total	100.0%	100.0%

Source: Statistics Canada. 2016d and Statistics Canada. 2016b.

f.60. Shuswap Area Labour Force Participation

The 2011 census data for the Shuswap Area Aboriginal populations shows that unemployment was noticeably higher than at the larger CSRD level.

Table 50: Aboriginal Labour Force Participation and Comparison to Columbia-Shuswap Regional District, 2011.

	Shuswap Area			Columbia-Shuswap RD		
	Male	Female	Total	Male	Female	Total
Participation rate	68.5%	57.1%	%[illegible]	62.7%	54.6%	58.6%
Employment rate	52.9%	49.8%	%[illegible]	55.2%	48.5%	51.8%

Unemployment rate	22.7%	13.5%	3%	12.0%	11.3%	11.6%

Source: Statistics Canada. 2016d and Statistics Canada. 2016c.

Aboriginal Population in the Invermere Area

f.61. Study Area Overview

As mentioned above, a large share of First Nations membership resides off reserve. It is believed that many live in the larger regions surrounding their reserve lands. The following uses Statistic Canada data to gain insight into the socio-economic characteristics of those identifying themselves as aboriginal in the 2011 Census. It is unknown what share of those identifying themselves of aboriginal ancestry are Secwepemc.

The Invermere Area is made up of East Kootenay Regional District Electoral Area G and F, and the municipalities of Radium and Invermere.

f.62. Aboriginal Identity in Invermere Area

Table 51 highlights the Aboriginal identity in the Invermere Area. As illustrated, 75 or 17% of the Aboriginal population identifies themselves as First Nations.

Table 51: Aboriginal Identity in Invermere Area, 2011

	#
First Nations (North American Indian) single identity	75
Métis single identity	310
Inuk (Inuit) single identity	0
Multiple Aboriginal identities	0
Aboriginal identities not included elsewhere	65
Total Aboriginal identity	**450**

Source: Statistics Canada. 2016d

f.63. Invermere Area Age Characteristics

Table 52 outlines the age characteristics for the First Nations population off-reserve in the Invermere Area and compares the age categories to the larger East Kootenay Regional District. As highlighted, the off-reserve First Nations population is slightly younger than the larger Region with the median age being 44.1 compared to 44.5 in the East Kootenay Regional District.

Table 52: Aboriginal Age Characteristics and Comparison with East Kootenay Regional District, 2011.

	Invermere Area		**East Kootenay**
	Total	**% Share**	**% Share**
Age 0-19	135	29.7%	21.8%
Age 20-64	315	70.3%	61.6%
Age 65 and over	0	0.0%	16.6%

	Invermere Area		East Kootenay
	Total	% Share	% Share
Total All persons	450	100.0%	100.0%
Median Age		44.1	44.5

Source: Statistics Canada. 2016c and Statistics Canada. 2016b.

f.64. Invermere Area Education Attainment

Of the aboriginal residents in 2011, 395 were over 15 years of age (i.e. employable). **Table 53** summarizes the educational attainment of these residents and highlights the high numbers who have obtained trades and apprenticeships or other non-university certificates.

Table 53: Aboriginal Education Attainment Comparison to the East Kootenay Regional District, 2011.

	Invermere Area		East Kootenay RD
	Total	% Share of Total	% Share of Total
No degree, certificate or diploma	130	32.9%	18.6%
High school diploma or equivalent only	120	30.4%	28.0%
Trades/apprenticeship or other non-university certificate	115	29.1%	15.8%
University certificate below bachelor level	5	1.3%	23.8%
University degree (bachelor level or higher)	25	6.3%	13.9%
Population 15 years and over	395	100.0%	100.0%

Source: Statistics Canada. 2016d and Statistics Canada. 2016b.

f.65. Invermere Experienced Labour Force

Table 54**Table 49** outlines the population identified as Aboriginal and the percentage shares of the experienced labour force and compares this with the larger East Kootenay Regional District. Overall, in the Invermere Area almost 35% of the experienced labour force that identify themselves as Aboriginal are employed in manufacturing and construction.

Table 54: Aboriginal Experienced Labour Force and Comparison to East Kootenay Regional District, 2011.

	Invermere Area	East Kootenay RD
Population 15 years and over	285	30,675
Agriculture, resource based	0.0%	13.8%
Manufacturing, construction	34.5%	14.3%
Wholesale, retail	13.8%	14.7%
Finance, real estate	0.0%	5.6%

	Invermere Area	East Kootenay RD
Health, education	20.7%	16.8%
Business services	0.0%	8.8%
Transportation, warehousing	0.0%	3.8%
Other services	31.0%	22.2%
Total	100.0%	100.0%

Source: Statistics Canada. 2016d and Statistics Canada. 2016b.

f.66. Invermere Area Labour Force Participation

The 2011 census data for the Invermere Area Aboriginal populations shows that participation and the employment rate is noticeably higher than the rate at the larger East Kootenay Regional District level. See **Table 55**.

Table 55: Aboriginal Labour Force Participation and Comparison to East Kootenay Regional District, 2011.

	Invermere Area			East Kootenay RD		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**
Participation rate	90.0%	61.2%	72.2%	71.8%	59.8%	65.8%
Employment rate	90.0%	63.3%	72.2%	66.3%	56.0%	61.2%
Unemployment rate	0%	0%	0%	7.8%	6.3%	7.1%

Source: Statistics Canada. 2016d and Statistics Canada. 2016b.

Aboriginal Population in the North Thompson Area

f.67. Study Area Overview

A large share of First Nations membership resides off reserve. It is believed that many live in the larger regions surrounding their reserve lands. The following uses Statistic Canada data to gain insight into the socio-economic characteristics of those identifying themselves as aboriginal in the 2011 Census. It is unknown what share of those identifying themselves of aboriginal ancestry are Secwepemc.

The North Thompson Area consists of Thompson Nicola Regional District Electoral Areas A, B, and O, and the municipalities of Barriere and Clearwater. Kamloops has been excluded because of the high number of Aboriginals from many other communities that would skew the results.

f.68. Aboriginal Identity in the North Thompson Area

Table 56 highlights the Aboriginal identity in the North Thompson Area. As illustrated, 345 or 67% of the Aboriginal population identifies themselves as First Nations.

Table 56: Aboriginal Identity in the North Thompson Area, 2011

	#
First Nations (North American Indian) single identity	345
Métis single identity	160
Inuk (Inuit) single identity	0
Multiple Aboriginal identities	0
Aboriginal identities not included elsewhere	10
Aboriginal identity	**515**

Source: Statistics Canada. 2016d

f.69. North Thompson Area Age Characteristics

Table 57 outlines the age characteristics for the First Nations population off-reserve in the North Thompson Area and compares the age categories to the larger Thompson Nicola Regional District. As highlighted, the off-reserve First Nations population is slightly younger than the larger Region with the median age being 43.0 compared to 44.0 in the Thompson Nicola Regional District.

Table 57: Aboriginal Age Characteristics and Comparison with Thompson Nicola Regional District, 2011.

	North Thompson Area		**Thompson Nicola RD**
	Total	**% Share**	**% Share**
Age 0-19	225	43.4%	21.7%
Age 20-64	260	50.6%	61.3%
Age 65 and over	30	6.0%	17.0%
Total All persons	515		100.0%
Median Age		43.0	44.0

Source: Statistics Canada. 2016c and Statistics Canada. 2016b.

f.70. Shuswap Area Education Attainment

Of the aboriginal residents in 2011, 425 were over 15 years of age (i.e. employable). **Table 58** summarizes the educational attainment of these residents and highlights the high numbers who have obtained trades and apprenticeships or other non-university certificates.

Table 58: Aboriginal Education Attainment Comparison to the Thompson Nicola Regional District, 2011.

	North Thompson Area		Thompson Nicola RD
No degree, certificate or diploma	110	25.9%	19.8%
High school diploma or equivalent only	155	36.5%	30.4%
Trades/apprenticeship or other non-university certificate	115	27.1%	14.1%
University certificate below bachelor level	0	0.0%	21.7%
University degree (bachelor level or higher)	45	10.6%	14.1%
Population 15 years and over	425	100.0%	100.0%

Source: Statistics Canada. 2016d and Statistics Canada. 2016b.

f.71. North Thompson Experienced Labour Force

Table 59 outlines the population identified as Aboriginal and the percentage shares of the experienced labour force and compares this with the larger Thompson Nicola Regional District. Overall, in the North Thompson Area almost 50% of the experienced labour force that identify themselves as Aboriginal are employed in agriculture, forestry, mining and other resource based activities.

Table 59: Aboriginal Experienced Labour Force and Comparison to East Kootenay Regional District, 2011.

	North Thompson Area	Thompson Nicola RD
Population 15 years and over	250	67,415
Agriculture, resource based	50.0%	8.9%
Manufacturing, construction	25.0%	14.0%
Wholesale, retail	0.0%	16.2%
Finance, real estate	0.0%	4.2%
Health, education	0.0%	20.3%
Business services	0.0%	8.7%
Transportation, warehousing	0.0%	6.1%
Other services	25.0%	21.6%
Total	100.0%	100.0%

Source: Statistics Canada. 2016d and Statistics Canada. 2016b.

f.72. North Thompson Area Labour Force Participation

The 2011 census data for the North Thompson Area Aboriginal populations shows that unemployment rate is noticeably higher than the rate at the larger Thompson Nicola Regional District level. See Table 60.

Table 60: Aboriginal Labour Force Participation and Comparison to Thompson Nicola Regional District, 2011.

	North Thompson Area			Thompson Nicola RD		
	Male	**Female**	**Total**	**Male**	**Female**	**Total**
Participation rate	55.0%	69.6%	64.7%	66.5%	60.4%	63.4%
Employment rate	45.0%	54.3%	49.4%	59.5%	55.3%	57.3%
Unemployment rate	27.3%	21.9%	23.6%	10.5%	8.6%	9.6%

Source: Statistics Canada. 2016d and Statistics Canada. 2016b.

G. DESCRIPTION OF POTENTIAL ADVERSE EFFECTS OF THE PROPOSED PROJECT ON SECWEPEMC TITLE & RIGHTS

Secwepemc worldview encompasses a holistic approach to the air, land, water, plants, and all living creatures that occur within Secwepemcúlecw (Secwepemc territory). This ecosystem-based approach is applied towards all resource management projects with the aim to conserve and protect a healthy and viable environment for all those who currently and will in the future rely on it.

While there is extensive Secwepemc knowledge and usage of the Upper Columbia River valley, the TU data included in this report was recorded in studies that were not specific to the LSA and is likely an underrepresentation of the actual TU information within the LSA. Also, based on our understanding of the proposed project, there remain a number of gaps in the understanding of project-related impacts on cultural and natural resources, and thus Secwepemc Title & Rights. The results and conclusions presented in Part B of this Environmental Assessment application are largely uncertain given these gaps, which presents a higher risk to natural resources and greater impact to Secwepemc Title & Rights.

Scientific uncertainty and information gaps have been identified as part of this process, a precautionary approach to effects determination is required in order to acknowledge existing limits of change, which have already been exceeded, and to prevent further adverse impacts to Secwepemc values. Secwepemc concerns on the approach, methods, and results presented in Part B have been outlined in four letters provided to BC Hydro[22] (refer to Appendix G). In general, these concerns demonstrate the need for a more comprehensive understanding of the cumulative

[22] Splatsin Comments on DAIR, Valued Components, and Baseline References, dated April 26, 2016; Rev 6 Baseline and Methodology Draft Report, dated March 24, 2016; Secwepemc Review and Response to Revelstoke Unit 6 Part B (Draft) Report, dated October 26, 2016;

impacts of BC Hydro infrastructure and operations on cultural and natural resources, as well as Secwepemc Title & Rights. The key concerns are further discussed below, specific to each of the previously identified traditional use value categories.

Loss of Fishing Areas and Opportunities

Water is a sacred component to the Secwepemc culture and worldview and is considered the essence of all life. Aquatic resources that are currently supported within the Upper Columbia watershed rely on the quality and quantity of water moving through this system. Secwepemc TU data reviewed for this study has identified key species including kickinee (kokanee), sturgeon, trout, Dolly Varden (now known to be bull trout), carp, whitefish, ling cod and salmon fishing in the area. Salmon historically were very important food resources for Secwepemc communities in the Upper Columbia system, but have been extirpated from the Upper Columbia for over 7 decades as a result of the development of dam and hydro facilities. Sturgeon are no longer harvested due to their endangered population status.

As acknowledged within Part B, Section 4.2 of this EA application, there are numerous challenges associated with studying the effects and responses of dam-related activities on fish and fish habitat within large river and reservoir environments. The need to fill gaps in information, such as recent kokanee population data, fish habitat/suitability changes in the Middle Columbia River, impacts on fish passage, impacts of fish entrainment at the population level, impacts on genetic diversity and population viability, impacts of changes of the thermal regime on productivity, community structure and food-web dynamics as a result of changing velocities and thermal regimes, remain a concern of the Secwepemc Nation.

With these information gaps in mind, the existing body of research and monitoring programs are showing that changes are occurring and that these changes are influencing fish population abundance and structure. Although complex interactions among dam operations as well as natural regime and their effects on productivity require further investigation, studies conducted to date show the Columbia River is negatively impacted. The effects of existing hydro activities in the Upper Columbia River Valley has an adverse and ongoing effect on Secwepemc people's fishing areas and opportunities as fishing pressure has increased for less abundant and varied food resources, and the health and quantity of the aquatic ecosystem has been compromised. Options for mitigation measures need to be investigated and applied accordingly with an adaptive management approach.

Loss of Hunting Areas and Opportunities

Key species that have been hunted and trapped by Secwepemc peoples in the Upper Columbia River valley include goat, caribou, deer, bighorn sheep, elk, bear, beaver, marmot, grouse, ptarmigan, and waterfowl. As with salmon and sturgeon, caribou are no longer harvested by the Secwepemc people because of this species' endangered population status. Caribou hunting is described in the oral history of all of Eastern Secwepemc communities. Areas used for meat drying areas and wildlife habitat features such as salt licks are also important areas associated with hunting opportunities.

Loss of habitat (e.g. via inundation or erosion), has been identified as the primary driver in species impacts in the project area (Utzig and Schmidt 2011). Changes in seasonal migration patterns, habitat connectivity, genetic exchanges, predator/prey dynamics, reproductive success and dispersal are all potential outcomes of habitat fragmentation. General habitat types that have been inundated and disconnected from other suitable habitat include older interior rainforests and lowland aquatic features (e.g., wetlands). Historically, the inundated area likely contributed to loss in old-growth ICH forest, as mentioned, that would have provided high suitability winter habitat to red-listed Mountain Caribou (Serrouya et al. 2007) as well as potentially blue-listed Fisher habitat (maternal dens in riparian forest) (www.cnrc.com/sar).

While this environmental assessment application uses the baseline condition of Revelstoke 5 to predict the effects of change as a result of the project, much of the baseline information surrounding the wildlife valued component remains uncertain and therefore represents a higher risk to wildlife and Secwepemc hunting opportunities. For example, additional field survey efforts are required to determine potential mammal species presence and habitat use in support of the reconnaissance level efforts that took place in 2008. These surveys should occur across a range of seasons to capture the various seasonal habitat requirements of local and regional species. Other information gaps related to potential project impacts on wildlife species include information for species at risk such as red-listed badger and grizzly bear. Also, reliance on data sets that have only partial coverage of the total area impacted and/or limited species groups results in considerable uncertainties and gaps in understanding the effects of Revelstoke 6 project on wildlife such as bird species.

The concepts of ecological and cultural thresholds need to be considered in this assessment. These impacts are not captured in the current process which focuses on the incremental potential effects of the project based on our current understanding of the existing condition following the Revelstoke 5 project.

Species specific management plans need to be developed to prevent adverse effects on local wildlife species (e.g. mountain goat, migratory birds) and to demonstrate that these species have been appropriately considered in order to avoid potential effects such as abandonment of important natal habitat, mortality or displacement.

Loss of Plant Harvesting Areas and Opportunities

Plants and plant harvesting activities identified in the TU information include various berries (e.g., saskatoon, black huckleberry, blueberry, raspberry, strawberry, black caps, red currant, gooseberry), other food plants (e.g., choke cherry, Indian potatoes (skwnwinm), wild rice, mushrooms, fiddleheads, rosehips), and other plan harvesting activities (e.g., firewood gathering, food preservation areas, birch bark and cedar root collecting areas). As there has not been a specific study of TU within the LSA and considerable terrestrial lands have been lost to inundation due to the existing hydro reservoir system, it is assumed that a number of plant harvesting areas and opportunities have likely already been affected or lost.

Areas that experience regular disturbance (e.g., drawdown zone), are prone to colonization by noxious weed plant species. The extent of noxious weed establishment in the project area and

from Revelstoke 5 remains unknown. Other information that is poorly understood includes the distribution and abundance of rare plants in the LSA. As the target species are typically difficult to locate, a greater amount of survey effort is required to appropriately determine potential presence in the LSA. Survey timing is also very particular to the prescribed growing season of the rare plants that have potential to grow in the LSA. These uncertainties point to the unknown level of effects that the baseline condition and the project will have on Secwepemc people's ability to harvest plants.

What is certain is that further alteration of the hydrological regime and increased flow velocities due to the Revelstoke 6 project will promote further erosion of upland and riparian areas, which will result in further loss of vegetation and thus impacts on Secwepemc access and opportunity for plant harvesting. The extent of these losses is unknown given the uncertainties associated with the approach and conclusions presented in Part B; however, it is important to note again that the current landscape has been dramatically altered and impacted so any further disturbances must be considered significant.

Loss of Medicine Gathering Sites and Opportunities

Medicines, perhaps more so than any other collected food or material resource, reflect contemporary interests in the cultural and spiritual identities of Indigenous peoples. Places that community members have gone to and continue to frequent for healing and physical health (e.g. hot springs, medicinal plant gathering areas), contribute to the on-going wellbeing of individuals and communities as a whole.

Within Part B of this Environmental Assessment application, many questions remain about the level of impact that the project will have on medicine gathering sites and opportunities. Identification and quantification of medicinal gathering sites presents challenges as much of this information remains confidential in order to protect the location of important medicinal areas. With this in mind, additional field efforts need to be made within the project area to update noxious weed information and rare plant information within prescribed growing seasons (early to mid-growing season), as well as known medicinal gathering areas within the LSA. As a site specific TU study in the LSA has not been conducted, it should be assumed that this information has not been adequately captured through other research.

Medicinal gathering areas and opportunities have also likely been impacted by historical reservoir operations, and have not undergone project specific TU studies. As such, baseline information needs to take into account the true baseline of the vegetation communities that existed prior to the initial construction of the Project. Current gaps in project information require many assumptions to be made regarding project environmental impacts that in turn inform the determination of effects. This presents an unacceptable risk to the remaining medicine gathering sites and will impact Secwepemc opportunities to continue harvesting medicinal plants and materials and to access these sites.

Loss of Spiritual/Ceremonial Sites and Opportunities

Review of existing TU data has shown that the Upper Columbia River valley supports community gathering areas, seasonal hunting camps, sacred areas, health sites (places for healing and physical health), spiritual training areas, traditional story areas, named places, and burial sites. Spiritual areas represent the places to connect to the land and are foundations of Secwepemc culture. This relationship and connection extends beyond the physical context of the land. For example, one of the primary goals of the Shuswap Indian Band is to see salmon return to the Upper Columbia as a fundamental step to regaining their cultural-spiritual connection to the land.

The importance of spiritual and ceremonial sites to the Secwepemc cannot be understated. A single spiritual site may be considered in greater need of protection than multiple other traditional areas that are used for a different purpose. The level of impact on a spiritual site can extend beyond physical footprints. For example, quiet is important for both spiritual sites and hunting sites. Industry-related noise may make a spiritual site unusable. Should a spiritual site be rendered unusable, it is most likely that other uses such as campsites or hunting sites also become unviable.

As there is known spiritual and ceremonial use of the Upper Columbia River valley, there is increased potential for adverse effects on these areas, as well as on the opportunities to carry out Secwepemc spiritual and ceremonial traditions as a result of the proposed project.

Loss of Habitat Sites and Opportunities

Cabins (also used as teaching places), homes, campsites, overnight campsites represent the ability for Secwepemc peoples to be present on the land and continue their cultural practices. Habitation sites are associated and in proximity to where food and technology are stored, where particular resources are extracted, and/or where resources are processed and transported to a more permanent base. Habitation sites are situated to take advantage of seasonal resource availability in Secwepemcúlecw. Camping in the Revelstoke area is also used in association with other cultural activities such as plant collection, fishing, hunting and for meeting other Indigenous groups.

Additional adverse effects resulting from inundation and erosion of land build on the existing footprint impacts and adverse effects from reservoir and other land use activities on Secwepemc habitat sites and opportunities. As a specific TU study of the LSA has not been conducted, the extent of the effect of the proposed project on habitat sites and opportunities must be approached with an abundance of caution in order to avoid causing additional harm on Secwepemc Title & Rights.

Loss of Archaeological Sites and Remains

Archaeology concerns itself with human behavior written not as words but as physical traces on the landscape. These are read and interpreted via the application of archaeological methods to produce what is known as the “archaeological record”. The British Columbia *Heritage*

Conservation Act is a measure of the value of this record to the people of British Columbia, and in its administration, archaeological heritage is defined as "the physical evidence of how and where people lived in the past" (Archaeology Branch 2015). The concept of archaeology as scientific inquiry is represented in the assessment of "Scientific Significance" in determining the fate of archaeological sites via the Archaeological Impact Assessment process (Archaeology Branch 1998).

Given the Secwepemc have direct connections to those who produced the archaeological evidence in the LSA, and to the landscape with which these cultures evolved distinctive interrelationships and within which they still live, the archaeological record is of special value to the Secwepemc beyond the considerations of conservation management of the physical evidence whereby most contemporary archaeological inquiry is operationalized. The concept of archaeological evidence also includes its representation of land use and occupancy as it pertains to issues of sovereignty, Secwepemc Title & Rights, and also to constitutionally protected cultural identity. Stewardship of the archaeological record therefore must be carried out within a broader framework than is currently typical of most archaeological investigations, whether driven by research or by the far more frequent heritage resource management activities, including those associated with BC Hydro's reservoir operations in general and the Revelstoke 6 project in particular.

It is anticipated that the ongoing erosion, and resultant increase in localized erosion from Revelstoke 6 will continue to contribute to the loss of archaeological sites and resources in the LSA and the Columbia valley. The selection of Revelstoke 5 as the existing conditions is problematic and ignores the devastating effects of decades of development and operation of hydroelectric facilities on the Columbia valley's archaeological resources (Mohs 1977) and the inability for the Secwepemc people to access the majority of archaeological sites in the upper Columbia valley due to land access issues. The data gaps apparent due to the incomplete status of the archaeological inventory in the LSA represent a high level of uncertainty and therefore a high level of risk to previously unrecorded archaeological sites at risk of increased erosion from Revelstoke 6. As such, the assessment of the effects to archaeological resources within the LSA must be approached with extreme caution, and an assessment of the effectiveness of proposed mitigations to address adverse effects to known archaeological resources must be completed.

Loss of Access to Lands and Resources

The Upper Columbia River valley is an integral part of the Eastern Secwepemc seasonal round and represents a well-known travel corridor. Historic trails, travel ways, horse trails, currently used trails, access routes, and snowmobile routes represent traditional and current connective use of the land and resources as part of a culturally significant whole. Travel ways are important not only for access to resources or to significant areas, but also for transportation and trade of resources.

Ongoing challenges for access to lands and resources can be based around local rules, resource availability, and family relationships to name a few. More recently, with the advent of additional development and private land ownership, increased dangers and hazards exist where Secwepemc

peoples are either discouraged or even prohibited from accessing previously desirable areas for resource harvesting and resource management.

It is anticipated that the ongoing erosion and periodic inundation resulting from higher water levels and increased flows in the Columbia River and reservoirs will continue to contribute to the loss of access to Secwepemc lands and resources as many of the travel corridors are located along areas that are typically easiest to travel (e.g., valley bottoms).

Loss of Land and Resource Management

For Eastern Secwepemc communities, land does not merely represent a physical entity. Spending time on the land harvesting resources, camping, travelling through, meeting with neighbouring communities and participating in other cultural activities is crucial to maintaining a spiritual and cultural connection to the land and to sustaining their identity as caretakers of the land. Land has also been managed to maintain ecological resources through controlled burning, selective harvesting, cultivation techniques and employing foraging strategies.

When a proposed development such as this project considers an assessment based on a specific development footprint area, the complexities of the cultural and spiritual relationship with the land tends to be marginalized. It is therefore anticipated that there will be adverse effects on Secwepemc Title & Rights associated with direct loss of lands and resource management, as well as through further dispossession of lands. These adverse effects are further described below.

Mass wastage of soils over time via soil creep has considerable implications on the health and function of the aquatic and terrestrial communities that support Secwepemc resources. As this project will be permanent, capturing the extent of operational impacts of the Revelstoke 6 activities on soils is essential in understanding the risks to Secwepemc cultural resources as a result of the project. At this time, the extent of impacts of erosion as a result of the existing reservoir activities, as well as the proposed project, on Secwepemc Title & Rights remains unknown as a specific TU study of the LSA has not been conducted and the quantification of the transport processes and storage sites within the reservoir system has not undergone a detailed assessment.

Not only is there anticipated physical loss of land and resource management opportunities, but the additional development and associated proposed operational activity is anticipated to contribute to the lessened ability for Secwepemc peoples to protect the holistic worldview and Secwepemc relationship to the land.

Cumulative Impacts on Title & Rights

Potential adverse effects of the proposed project on Secwepemc Title & Rights (e.g., land and resource management, access to lands and resource management, archaeological sites and remains, habitat sites and opportunities, spiritual and ceremonial sites and opportunities, medicinal gathering sites and opportunities, plant harvesting areas and opportunities, hunting areas and opportunities, and fishing areas and opportunities) are anticipated due to a lack of baseline information as well as significant gaps in the understanding of the extent and

implication that these effects will have on the ability of the Secwepemc communities to carry on their cultural and spiritual connections with the land in and around the proposed project area. There are a number of existing key indicators (e.g., extirpation of salmon, endangered status of caribou and sturgeon, loss of lands and resource management areas, reduced abundance of plant species and other wildlife habitats, loss of archaeological sites and remains) that demonstrate that the current development and use of the Upper Columbia River valley has already eroded and fragmented Secwepemc territorial integrity and cultural continuity.

A comprehensive cumulative effects assessment on Secwepemc Title & Rights, including past, present, and (reasonably foreseeable) future development and impacts within a scientifically justifiable temporal and spatial scope, should be completed. This assessment should include both cultural and environmental impacts and should include all BC Hydro infrastructure and operations associated with Mica, Revelstoke, and Keenleyside Dams (e.g., access roads, transmission lines, capacitor stations and other associated infrastructure). Results of the cumulative effects assessment will inform the risk management strategy and management actions required to approach the Secwepemc interests that have already exceeded the limits of acceptable change.

H. DESCRIPTION OF MITIGATION MEASURES TO AVOID OR REDUCE EFFECTS ON SECWEPEMC TITLE & RIGHTS

Monitoring and adaptive management programs are integral steps of the process which inform the development of mitigation and compensation requirements, and increase the level of certainty and confidence surrounding the effectiveness of mitigation and management actions. Ongoing monitoring, investigation, and information dissemination are extensions of the proponent's duty to continue providing information on the hazardous activity or product over time. This approach helps to understand the level of risk and work required towards increasing confidence in the effectiveness of mitigation measures; however, it does not guarantee that the risk is lowered or eliminated or that there is additional confidence in the risk assessment. The safest alternatives to meet a specified need must be continuously evaluated with independent review.

Specific protection, enhancement, and mitigation measures are required to prevent and avoid adverse effects on valued components (e.g., stream channel works, lake fertilization, stand structure treatments, restoration of connectivity, habitat securement, artificial population and habitat enhancement). Some mitigation can be carried out now, with further measures implemented as the understanding of cumulative effects and success of mitigation measures is better understood. It is important to understand that where we wait to act for additional scientific proof of hazards that have already been experienced, some of the few remaining opportunities for truly preventative actions may be lost. A resilience-based approach should apply towards all of the proposed actions.

It is important to note that current mitigation strategies aimed at offsetting operational impacts on cultural and natural resources have had limited success (e.g. Fish Entrainment Strategy, Reservoir Revegetation Efforts...etc.). More importantly, there has been little effort to develop

and implement mitigation strategies, recognizing that the Water Use Planning process is aimed at first determining operational effects. The current approach is unacceptable and continues to present a high risk of further impacts to cultural and natural resources, and Secwepemc Title & Rights.

The following is a preliminary overview of Secwepemc expectations for mitigating the impacts on cultural and natural resources and Secwepemc Title & Rights. Further scoping and discussions are warranted as part of the overall consultation process with BC Hydro and the Provincial Government.

1. The first step in this process involves a comprehensive cumulative effects assessment to better understand past, present, and future impacts on cultural and natural resources in the Upper Columbia River Basin. The underlying objective of this assessment will be to identify the significance of impacts, acceptable thresholds, and limiting factors associated with cultural and natural resources within the Upper Columbia River Basin. This assessment would include, but is not limited to, environmental, archaeology, cultural heritage, and socio-economic impacts.

2. The second step in this process, which should be initiated prior to the completion of the cumulative effects assessment, is the development and implementation of adaptive cultural and natural resource management programs. Key components of these programs would include the development of acceptable thresholds for resource management, development and prioritization of mitigation strategies, implementation of mitigation strategies, and effectiveness monitoring. Again, these programs would include, but are not limited to environmental, archaeology, cultural heritage, and socio-economic mitigation strategies.

Mitigation measures which can be applied in the short term to better understand and offset adverse effects on Secwepemc Title & Rights include:

<u>Archaeology</u>

- Immediately develop and implement a mitigation strategy to address impacts to known archaeological sites in Arrow, Revelstoke and Kinbasket Reservoirs.
- Complete, within 3 years of the issuance of the EA Certificate, a compensation agreement that fully addresses the non-mitigatable impacts to archaeological resources impacted by operations of the Revelstoke 6 facility in the Arrow, Revelstoke and Kinbasket Reservoirs, including impacts to date and impacts reasonably foreseeable in the future.
- Complete an inventory of 100% of modeled high (this needs to be defined elsewhere in this document – i.e. if we are only ranking as low or high, give rationale) archaeological potential in the LSA, and a representative sample of low archaeological potential. This includes landforms at risk of bank failure above the reservoir high pool;
- Expand the archaeological potential model to other reservoirs in Secwepemc Territory;
- Revisit archaeological sites where inventory is incomplete, complete inventories and develop mitigation strategies for the protection and management of archaeological

resources;
- Commence biannual monitoring of effects on LSA archaeological sites at low pool;
- Expand archaeological studies to determine whether effects of Revelstoke 6 impacts the Nakusp Narrows and, if so, develop mitigation strategies to address these;
- Fund research regarding identification and investigation of intact sites above full pool;
- Develop and implement a culturally appropriate adaptive archaeological management plan, with involvement and training of community members to carry out this monitoring;. The short-term objective would include a much greater involvement with RAP and the long-term objective would be to assume the jurisdiction and coordination with other nations (e.g., Ktunaka and Syilx).
- Implement mitigation measures proposed in Part B; and
- Fund community members' education for archaeology/anthropology programs.

Environmental

- Based on the existing environmental impact levels resulting from previous hydro activities and other development and land use activities in the Upper Columbia River valley, in conjunction with high uncertainty surrounding the effectiveness of existing and proposed mitigation, the overall approach to the environmental impact assessment of the proposed Revelstoke 6 Project needs to apply a greater degree of precaution in the residual effects determination after mitigation;
- Expedite implementation of current (Rev 5) mitigation strategies (e.g. fish entrainment, reservoir and stream fertilization, increased shoreline erosion control, revegetation…etc.);
- Secure and purchase ecologically significant lands within the LSA for conservation, enhancement and stewardship activities;
- Soft operating constraints for the Middle Columbia River, Kinbasket Reservoir, and Arrow Lakes need to be formalized.; and
- Fund Secwepemc community members' education for environmental programs to support Secwepemc involvement in the implementation of the above mitigation strategies.

Cultural Heritage

- In recognition of the profound losses sustained by the Secwepemc people from the operation of the Revelstoke generating facility, fund and implement a Columbia Basin Cultural Heritage Management Board to address mitigation activities upstream of Nakusp.
- Complete, within 3 years of the issuance of the EA Certificate, a compensation agreement that fully addresses the non-mitigatable impacts to non-archaeological cultural heritage resources impacted by operations of the Revelstoke 6 facility in the Arrow, Revelstoke and Kinbasket Reservoirs, including impacts to date and impacts reasonably foreseeable in the future.
- As a short term measure, BC Hydro to provide funding for the construction and operation of a Secwepemc Cultural Heritage Center in the Columbia River Basin, potentially near Revelstoke or Golden.

Socioeconomic

Establishing mitigation measures to avoid or reduce effects in the social and economic realms required an initial measurement of baseline information. As discussed above there is currently no systematic primary data presented on which the -Community Wellbeing VC can be established for any of the six Secwepemc Nation Bands (members living on and off reserve), impacted by this project. The same holds true for the Economic VC where the three subcomponents of Economic Development, Labour Market and Non-Traditional Land and Resource Use do not have current baseline information and did not determine current capacity and utilization.

It is recommended that BC Hydro commit to the following:

- Funding to complete systematic primary data gathering for traditional socio-economy, and a comparative analysis of the changes to the Secwepemc socio-economy occurring over time to present as this relates directly and indirectly to the construction and operation of hydropower infrastructure on the Columbia River above Revelstoke.
- Work cooperatively with the Secwepemc to address recognized direct and indirect impacts through mitigation and compensation strategies.

Community Wellbeing

There are many rigorously tested, measures for assessing individual and community wellbeing. Amongst the measures there are five systems[23] that are low cost to implement and replicable across cultures and time. All require primary data collection at the individual level. A good example is the World Health Organization Quality of Life (WHOQOL)-BREF survey and indicator. To adequately assess the wellbeing of the six Bands (with multiple physical communities), would require the implementation of a survey of a significant random sample of member adults (individuals over 18 years old) in these Bands with a +-5% error (accuracy), 19 times out of 20 (reliability). Given the small populations, even if all communities in each Band were combined, a near 75% response rate would be required for this level of accuracy and reliability.

It is recommended that BC Hydro commit to the following:

- Provide funding to complete primary data collection on Community Wellbeing for the 6 directly impacted Secwepemc Communities.
- Work cooperatively with the Secwepemc to address recognized direct and indirect impacts through mitigation and compensation strategies.

Economic Development

For the subcomponent of economic development, there is a brief overview narrative; however, here too there is no baseline, resulting in the assessment missing the critical investigation of current commercial capacity by component by First Nation community and future planned

[23] Dronavalli, M, et al. Journal of Epidemiol Community Health, 2015; 69:805-815, ***A Systematic review of measurement tool of health and well-being for evaluating community-based interventions***.

capacity development. Without this critical background, the tasks and steps to ensure suitable engagement of the First Nations communities cannot be determined. For example, if there is a community approved, adequate system for commercial involvement in the project then there is limited need for mitigation measures. However, if there is not, then a mix of individual and business development is required immediately to enable commercial involvement in the project during implementation. The commercial development could be focused on direct project related sub-contracting, or indirect services to project workers and contractors.

Construction of Revelstoke Unit 5 demonstrated that nearly all the labour required must be skilled and certified. For the subcomponent of labour market, there is broad data for on-reserve members only, and the data is 5 years old. Unfortunately, the data that is five years old is not of the detail that would enable an assessment of current capacity with appropriate skills and certification by labour component, First Nation community, and future planned capacity to assess individual or community ability to participate as skilled labour in the project. To properly determine the next steps required for this sub component in the current context will depend on the detailed results of the systemically collected baseline data. Without the proper baseline, it becomes impossible to determine if there is an adequate approach to ensure suitable participation in the project.

As mentioned during the review, combining forestry, mining and agriculture into other land and resource use made it difficult to follow how each key sector, which has very unique attributes, was being assessed. In addition, with the tourism and recreation sectors there was a lack of a systematic overview and scoping of the usage and utilization in the LSA and RSA. This was further complicated by an overall inadequate baseline that again did not encompass a full understanding of how the resources were being utilized and their dependence on the LSA and RSA to sustain operations.

In addition, there was no information on how dependent First Nation communities are on the land and resource sector and the industries that they involve within the LSA or RSA. There was also no discussion of potential foregone activities First Nations are involved in or working towards and what mitigation would be considered.

It is recommended that BC Hydro commit to undertaking the actions outline under the Socioeconomic section above.

I. CHARACTERIZATION OF THE RESIDUAL ADVERSE EFFECTS ON SECWEPEMC TITLE & RIGHTS AFTER MITIGATION

Currently, although there remain significant gaps, there is sufficient information regarding the effects of existing reservoirs and operations on Secwepemc Title & Rights to understand that many of these rights have already been adversely effected, while Title has been significantly and unjustifiably infringed. Some examples include the impacts of ongoing erosion and loss of land due to the daily fluctuation in flows and water levels, the complete absence of anadromous salmon in the Upper Columbia River valley, endangered sturgeon continued population decline, archaeological resources and sites are exposed and damaged, and caribou populations and habitat

continue to decline and fragment. Decision over the development and operation of hydro-electric facilities have been made, until recently, with a complete disregard to the input of indigenous governments and impacts have gone un-noticed and unreported. We know that human activities, including BC Hydro infrastructure and operations have contributed significantly to these effects and infringements.

What remains unknown is the effectiveness of current mitigation measures at avoiding or minimizing adverse effects and infringements, as well as the extent of the effects on Secwepemc Title & Rights. The cumulative effects assessment requested above will provide additional knowledge on these gaps. There is a high level of uncertainty and risk by relying on ongoing effects and monitoring studies, as well as the preliminary (incomplete) results of Part B to establish a baseline condition and to determine residual effects on Secwepemc Title & Rights. It's important to also note that no amount of mitigation or compensation could completely offset the impacts on Secwepemc Title & Rights in the Upper Columbia Basin resulting from BC Hydro infrastructure and operations.

In general, the current approach to characterizing residual effects is deeply flawed in that effects and the effectiveness are merely predictions. Residual effects must be assessed through long-term adaptive monitoring programs following the application of mitigation, and must be measured against acceptable thresholds for change, as outlined in Section H. More importantly, all residual effects must be assessed and considered under a cumulative effects framework.

A preliminary characterization of residual effects on Secwepemc Title & Rights based on criteria described in
Table **61** are presented in Tables 62, 63, 64, and 65 and will require further consideration and revision as the requested mitigation measures presented in Section H are implemented.

Table 61: Criteria for the Characterization of Residual Effects on Secwepemc Title & Rights

Criteria	Description	Definitions	
Magnitude	Expected size or severity of the residual effect	Archaeological Resources	• Surface Disturbance • Partial Erosion • Total Erosion
		Fishing, food and medicinal plants, and Hunting Resources	• Low – within range of natural variation (<10 %) • Moderate – outside of range of natural variation (10-50%) • High – outside of range of natural variation (>50%)
		Spiritual and Ceremonial Sites	• Within range of natural variation • Outside of range of natural variation
		Access, Habitat Sites, Lands and Resource Management	• Low – Uninterrupted access and ability to use • Moderate – Partial access and ability to use • High – No access and inability to use

Criteria	Description	Definitions
Context	The current and future sensitivity and resilience of the VC to change caused by the project.	• High resilience and low sensitivity to change • Moderate resilience and moderate sensitivity to change • Low resilience and high sensitivity to change
Extent	Spatial scale over which the residual effect is expected to occur	• Site-specific (Revelstoke Reach – RR, Mid-Columbia Reach – MCR, Capacitor Station – CS, Construction Area – CA) • Local • Regional • Out of scope
Duration	Length of time over which the residual effect is expected to persist	• Short term • Long term • Permanent
Frequency	How often the residual effect is expected to occur	• Never • Infrequent • Frequent • Continuous
Reversibility	Whether or not the residual effect can be reversed once the physical work of activity causing the effect ceases	• Fully reversible • Partially reversible • Irreversible

Table 62: Summary of Residual Effects of the Project on Secwepemc Title & Rights as they relate to Archaeological Sites and Remains

Effect	Criteria	Rating	Rationale
Measurable Disturbance to or Loss of Archeological Sites	Magnitude	Surface Disturbance Subsurface Disturbance Unauthorized Collection Partial Erosion Total Erosion	• Increased erosion resulting from periodic increases in flow volume. (Measurable disturbance or loss of archaeological heritage resources • Predicted effects are based on modeling using data with insufficient precision • High level of uncertainty regarding the actual magnitude of predicted effects • Loss of evidence of use and occupation, directly related to strength of claim
	Context	High Sensitivity and Low Resilience	• Existing condition is heavily disturbed and sites are sensitive to erosion and have no resilience following disturbance without mitigative measures
	Extent	Revelstoke Reach (RR) Mid-Columbia Reach (MCR) Out-of-Scope (OOS)	• The project LSA where predicted and unpredicted effects of erosion impact archaeological resources • Both the number of archaeological sites and the extent of the predicted effects are not well understood • Incomplete inventory of the archaeological resources in the LSA • Effect may be present in the Nakusp Narrows, unknown whether LSA is an appropriate selection based on current information
	Duration	Permanent	• Once the effect takes place, the effect will remain in perpetuity
	Reversibility	Irreversible	• Archaeological resources are non-renewable, once they have been disturbed or destroyed

Effect	Criteria	Rating	Rationale
			they are gone forever
	Frequency	Frequent	• Effects will take place on an annual basis, at all ALR pool elevations, and potentially daily
Change in the accessibility of archaeological sites	Magnitude	Surface Disturbance Subsurface Disturbance Unauthorized Collection	• Decrease in accessibility for cultural purposes • Increase in accessibility could result in site damage by 4x4 recreationalists and increase in unauthorized collection
	Context	High Sensitivity and Moderate resilience	• Existing condition partially or completely restricts access to majority of archaeological sites in LSA • Increase or decrease in accessibility will have both adverse and beneficial impacts
	Extent	Revelstoke Reach (RR) Mid-Columbia Reach (MCR)	• Both the RR and MCR portions of the LSA will result in changes in accessibility, and the potential for changes in accessibility to unknown archaeological sites
	Duration	Long term	• Effect will last for duration of the project, but will cease after the project is decommissioned
	Reversibility	Partially Reversible	• Effect is reversible, but loss or disturbance resulting from effect will be permanent
	Frequency	Infrequent	• Changes in accessibility measures in hours or days in a year.

Table 63: Summary of Residual Effects of the Project on Secwepemc Title & Rights as they relate to Fishing, Plant and Medicine Gathering Areas and Hunting

Effect	Criteria	Rating	Rationale
Measurable Disturbance to or Loss of Fishing, Hunting, and Plant and Medicine Harvesting Areas and Opportunities	Magnitude	Moderate	• Overall, the level of disturbance is anticipated to further impact distribution of these cultural resources. This level of disturbance will vary depending on the specific cultural resource. For example, there could be specific plants • High level of uncertainty regarding the actual magnitude of predicted effects
	Context	High sensitivity and Low Resilience	• Salmon, sturgeon, caribou are all examples of species that are either endangered or extirpated from the LSA. These species remain unavailable for cultural use as a result of historical reservoir activities.
	Extent	Revelstoke Reach (RR) Mid-Columbia Reach (MCR) Local Regional Out-of-Scope (OOS)	• A number of these cultural resources are distributed beyond the project area and extend or migrate through the region.
	Duration	Permanent	• Without mitigative, enhancement, or protective activities, it is expected that the impacts of the activities on these cultural resources will be permanent. • There is a high level of uncertainty on the effectiveness of many of the existing mitigation measures. What we do know is that for a number of these resources, they are no longer available for cultural use.
	Reversibility	Irreversible	• For many of these cultural resources, the effect will not be reversible as dam activities

Effect	Criteria	Rating	Rationale
			are intended to be permanent and the footprint impacts are directly associated with loss of certain habitats and growing conditions.
	Frequency	Frequent	• Effects will take place on an annual, seasonal, and daily potential.

Table 64: Summary of Residual Effects of the Project on Secwepemc Title & Rights as they relate to Spiritual and Ceremonial Sites

Effect	Criteria	Rating	Rationale
Measurable Disturbance to or Loss of Spiritual and Ceremonial Sites	Magnitude	Outside of range of natural variation	• Because there are known spiritual and ceremonial sites in the area, the it is anticipated that effects associated with the project will be greater than what would naturally effect these areas and opportunities • High level of uncertainty regarding the actual magnitude of predicted effects
	Context	High sensitivity and low resilience	• Impacts to spiritual and ceremonial sites and opportunities extend beyond the physical context and
	Extent	Revelstoke Reach (RR) Mid-Columbia Reach (MCR) Local Regional Out-of-Scope (OOS)	• The relevance of spiritual and ceremonial sites is such that a particular site may • Both the number of spiritual and ceremonial sites and the extent of the predicted effects are not well understood
	Duration	Permanent	• Once the effect takes place, the effect will remain in perpetuity
	Reversibility	Irreversible	• Spiritual and ceremonial resources are non-renewable, once they have been disturbed or destroyed they are gone forever
	Frequency	Frequent	• Effects will take place on an annual basis, at all ALR pool elevations, and potentially daily

Table 65: Summary of Residual Effects of the Project on Secwepemc Title & Rights as they relate Access, Habitat Areas, Land and Resource Management

Effect	Criteria	Rating	Rationale
Measurable Disturbance to or Loss to Access, Habitat Sites, Land and Resource Management Opportunities	Magnitude	Moderate	• In addition to the extent of physical land being lost to inundation and increased erosion, these areas may be associated with are accessible through lands that are going to be lost to erosion or inundation. • High level of uncertainty regarding the actual magnitude of predicted effects
	Context	High sensitivity and low resilience	• Changes to the soil material and hydrological regime can heavily alter ecosystem function and primary productivity.
	Extent	Revelstoke Reach (RR) Mid-Columbia Reach (MCR) Local Regional Out-of-Scope (OOS)	• The project LSA where predicted and unpredicted effects of erosion impact to access, habitat, and land and resource management areas. • Incomplete inventory of these resources in the

Effect	Criteria	Rating	Rationale
			LSA
	Duration	Permanent	• Once the effect takes place, the effect will remain in perpetuity
	Reversibility	Irreversible	• As the project timeline is permanent, it is expected that effects on access, habitat and land and resource management areas and opportunities will be irreversible as they may be so altered that they would not be able to return to the original condition.
	Frequency	Frequent	• Effects will take place on an annual basis, at all ALR pool elevations, and potentially daily

There is high likelihood that there will be residual effects to Secwepemc Title and Rights as a result of the proposed project. When looking at the existing condition as a baseline, there is already cultural and spiritual disconnect and marginalized ability for Secwepemc peoples to maintain their identities through the strong connection to the traditions and land-use practices of their ancestors. Archaeological sites and remains, salmon, sturgeon, caribou are just a few examples of cultural resources that have already exceeded the cultural thresholds of change and are either heavily impacted or have already become lost Secwepemc traditions.

Because of significant data gaps in the understanding of the effectiveness of mitigation measures, the nature of the project with the VC interaction, and context and extent of TU data in the LSA, there is a lower level of confidence associated with the residual effect predictions. To address this uncertainty, a precautionary approach is required wherever a decision may serve to eliminate or reduce a hazard. It can be applied both in preventing hazards and in restoring past or ongoing damage to ecological health, where there are reasonable grounds to believe that harm may result. A requirement of this approach is that provisions are included for wider ecological margins of error where there is uncertainty surrounding ecosystem capacity to absorb harm, including from cumulative sources. The more serious the magnitude and nature of the potential harm, the wider the margin for error in the assumption of risk.

Protective, enhancement or mitigative actions need to respond to early warnings, such as when there is credible evidence that harm is occurring or is likely to occur. These actions need to take place, even if the exact nature and magnitude of the harm are not fully understood. The need for preventative action and the development of appropriate thresholds for action when there is a significant threat, and not only when concerns reach the level of serious or irreparable damage, is imperative in protecting Secwepemc Title & Rights.

J. SUMMARY OF ANY OUTSTANDING SECWEPEMC ABORIGINAL TITLE & RIGHTS ISSUES IDENTIFIED

1) Known patterns of Secwepemc use and occupancy from the past exist; however, the connections to the impacts cannot be made due to the extent and magnitude of change. The final stages of the reservoir development and operational activities are being proposed with Revelstoke 6 and considerable gaps and uncertainty about the existing impacts on Secwepemc Title and Rights remain outstanding. For example:
   (a) Critical travel/trade routes are cut;
   (b) Access to important spiritual, ceremonial and gathering areas, resources and values (this needs to be defined in terms of the inter-relationship between resources and landscapes – spirituality – health and well-being and the economy of the Secwepemc) have been terminated or significantly altered; and
   (c) Archaeological sites, including village sites and grave sites, have been or are in the process of being destroyed;
2) Secwepemc culture is a land-based culture. Reservoir operations and other land resource development activities in the Upper Columbia River valley has altered the nature and function of the landscape to such an extent that there is a Secwepemc cultural disconnect with the land. This must be quantified and reversed;
3) The extent of the overall negative physical, spiritual and mental health impacts of the changes of lifestyle as a result of the abandonment of Secwepemc traditional activities, remains unknown but must nevertheless be quantified and addressed;
4) Water in the Columbia River valley is being managed for power generation and flooding control, with some consideration to environmental requirements. There is currently no management consideration or plans for Secwepemc Title and Rights;
5) Secwepemc way of life has been significantly altered and impacted with respect to BC Hydro past hydro development and on-going activities in the Columbia River valley including cultural heritage, social and economic, environment and archaeology;
6) There has been no free and prior informed consent involving the Secwepemc on any previous hydro development activity and hydro operations in the Columbia River basin. Furthermore, the Secwepemc have not been consulted, involved, compensated or engaged in any respect to mitigation planning until this current proposed project.

K. SUMMARY OF PUBLICALLY AVAILABLE ARRANGEMENTS OR AGREEMENTS REACHED BETWEEN THE PROPONENT AND SECWEPEMC OR SPECIFIC SECWEPEMC COMMUNITIES

With respect to the Rev 6 project, there are no arrangements or agreements available, publicly or otherwise, reached between BC Hydro and the Secwepemc at the community, Division or Nation levels.

12.2 OTHER MATTERS OF CONCERN TO ABORIGINAL GROUPS

In addition to the potential adverse effects of the proposed project on Secwepemc Title & Rights that have already been discussed, the following sections describe other matters of environmental, social, economic, heritage and health concerns of the proposed project to Secwepemc communities.

12.2.1 ENVIRONMENTAL EFFECTS

The connections between all living things is fundamental to Secwepemc identity and ability to act as caretakers of the land. Valued components, as identified through the BC EAO process, can oversimply the complex nature of the surrounding environment and its interconnected relationships.

When the Revelstoke dam was initially constructed, there was a lack of suitable information to appropriately assess levels of significance of potential impacts to ecosystems and species (Utzig and Schmidt 2011). As a result, there have been considerable impacts to the ecological conditions of the Upper Columbia River valley with little understanding surrounding the significance of these impacts and how to effectively compensate for them.

While more recently there has been a tremendous amount of work and effort undertaken to better understand the level of impact associated with previous hydro activities, gaps remain not only in the understanding of the baseline conditions of the proposed project assessment, but also as to how this project information relates to the complicated nature of ecological function and processes, population viability, primary productivity, natural disturbance regimes, floodplain processes, trophic dynamics, nutrient cycling, genetic exchange, predator/prey dynamics, reproduction, dispersal, seasonal migrations, susceptibility to invasive species, and altered annual hydrologic regimes.

Because the nature of threats to Secwepemc Title & Rights in the Upper Columbia River valley is complex and uncertain, an abundance of caution needs to be applied towards any future management decisions and actions. Where there is credible evidence that harm is occurring (e.g., impacts to fish movement, permanent loss of upland and riparian terrestrial habitats, nutrient effects, erosion, loss of seasonal habitats), protective measures and actions need to take place, even in the absence of a full understanding of the extent and magnitude of the harm. A comprehensive cumulative effects assessment including past, present, and reasonably foreseeable future development and associated impacts should be completed to capture the potential for residual cumulative effects on Secwepemc Title & Rights.

12.2.2 ECONOMIC EFFECTS

Without an adequate economic baseline at the individual First Nation Band level, it is a challenge to estimate the positive or negative economic effects of the project on individual Bands, the six Bands combined or aboriginal people living within the LSA or RSA. It is also a

challenge attempting to connect the situation for Revelstoke Unit 5 or the recent Mica projects to potential results for the planned Revelstoke Unit 6 unless there is systematic access to employment, subcontracting, and service provision during construction, as structured in the recent Mica projects.

It is key to Secwepemc communities that there is systematic access to the potential positive economic effects of the Revelstoke Unit 6 project.

12.2.3 SOCIAL EFFECTS

There are no Secwepemc communities within the LSA where the bulk of the potential positive and negative social impact concerns are focused. It is expected that there will be some Secwepemc members living within the LSA, (living off reserve) at the time of construction experiencing the spectrum of social impacts from the project. There are Secwepemc communities within the RSA that could potentially capitalize on the positive social effects given the projected limited access to housing. The projected housing limitation is expected to limit the potential for residents, including Secwepemc members and their families, to enjoy the social benefits derived from consistent employment and potential formal certified training for and during project construction.

Other potential social effects are difficult to ascertain with the lack of a reliable baseline, program goals and outcomes confirmed with Secwepemc communities and mechanism to measure pre-designed pre-and post metrics that is able to isolate the cause and effect relationship and focus on identifying community success as a result of the project. It is key to Secwepemc communities that there is systematic access to the potential positive social effects of the Revelstoke Unit 6 project. Also, it is critical that a timely and representative measuring system be implemented to monitor and adjust interventions to maximize the positive social impacts of the project.

12.2.4 HERITAGE EFFECTS

The Secwepemc is a diverse Nation, and the Territory covers a wide geographic area where people have developed unique cultural practice, such as ceremonies, subsistence strategies, and linguistic dialects, which differ between bands. The impact, in general, of development projects such as dams, and more broadly, participation in global markets, can have a negative effect on maintaining cultural diversity, and therefore cultural heritage. Worldwide it has been recognized that protecting diversity is a human rights concern, in particular relevant to Indigenous Peoples:

> *The defence of cultural diversity is an ethical imperative, inseparable from respect for human dignity. It implies a commitment to human rights and fundamental freedoms, in particular the rights of persons belonging to minorities and those of indigenous peoples. (UNESCO: Article 4 2001).*

Protecting heritage, and even identifying what one's heritage entails, in order to better grapple with in what ways development has, or will, impact it, can be challenging. Cultural Heritage includes such things as, places on the landscape where cultural activities take place, and implies

a connection to the past, therefore encompassing such things as archaeological sites (e.g. see Millennia 2012, re measurable negative effects to archaeological sites due to water, wind, and erosion in the Arrow Lakes Reservoir). However, Cultural Heritage also is concerned with knowledge, such as language, oral history, music remembered and passed down. Many of the cultural practices, unique to the Secwepemc bands, while deeply embedded in the landscape, are not always linked directly to places on the landscape, or they may be, but are not linked only to one place. For example, while areas with past and present birch trees may be mapped during a Traditional Use Study, the knowledge of how to make a basket passed down from one's grandmother is an example of a non-site-specific type of Traditional Ecological Knowledge. During community mapping interviews conducted in Secwepemc Territory, Traditional Use Values are one type of heritage which may be recorded and can be assessed for impacts by development.

Traditional Use (TU) Values (what is impacted) is defined as, in the context of Traditional Land Use Studies, a 'Value' refers to a specific place, resource, or interest reported by a First Nation member during the study, and considered important to the on-going practice of that First Nation's rights and use. A Site-Specific TU Value is one that is reported as specific and spatially distinct and may be mapped (though locations may be considered confidential). Site-Specific Values, such as cabins, trails or animal kill sites, reflect specific instances of use that anchor the wider practice of livelihood within a particular landscape. A Non-Site-Specific TU Value may be specific to a resource or other concern, but is spatially indistinct or difficult to map. Non-Site-Specific Values include critical conditions or elements that must be present for the continued practice of Aboriginal Rights, such as the hunting and gathering of wild foods. As such, Non-Site-Specific Values range from the direct presence of traditionally hunted animals and other wild foods on the land to continued access to traditional hunting areas and non-contaminated sources of wild foods. Non-Site-Specific Values also include intangible cultural resources, such as the transmission of knowledge across generations and continued use of traditional place names. Research undertaken during the Revelstoke 6 Cultural Heritage Assessment will provide more detailed information on community concerns regarding heritage, TEK, and the impacts of industrial development.

Although there are a large number of Secwepemctsin place names recorded within the LSA (from previous research), funding from BC Hydro is imperative to specifically record additional place names within the LSA which have not been previously documented. For example, Simpcw has a large archive of Secwepemctsin place names for areas where they have been funded to do TUS and LUOS. Simpcw has the largest percentage of Secwepemctsin speakers in the study area and identifies the need for additional research. Furthermore, place names research will assist in accurately assessing cultural heritage impacts from Project. All six Secwepemc Bands have requested funding from BC Hydro to conduct CHA and/or LUOS research specific to the LSA.

While the 1927 amendment to the *Indian Act* criminalized fighting for their lands and way of life, another government policy, initiated in 1884 had begun to have an affect by the 1920s. This policy was set up by the Canadian government and administered by churches. It had the claimed objective of educating Aboriginal children but also the more damaging and equally clear objectives of indoctrinating them into Euro-Canadian and Christian ways of living and thus assimilating them into mainstream Canadian society. From 1920 onwards attendance at

residential schools was mandatory for all Aboriginal children aged 7-15. The majority of Eastern Secwepemc school-age children were sent to attend the Kamloops Indian Industrial (later known as Residential) School or the Cranbrook (St. Eugene's) Indian Residential School.[24]

> *The Secwepemc language, culture, and way of life are being severely endangered and on the verge of extinction. The onslaught of colonization and forced attempts at assimilation and acculturation inflicted devastating atrocities on the Secwepemc way of life. Their lands, culture, and language were systematically attacked and destroyed. The oppressive and paternalistic efforts of the Canadian government and various churches to suppress language and culture were almost successful; however, remnants of the language and culture remain intact (Secwepemcúlecw, Land of the Shuswap 2016).*

In addition to the negative impacts of Canadian Government policies on Indigenous languages, participation in the economy of British Columbia has had a negative effect on Peoples' ability to retain their Indigenous languages. These impacts are summarized in the fact sheet of the 2014 Report on First Nations Languages in B.C. which attributed the dramatic decline in B.C. First Nations languages since the 1800s to the following causes:

- *The Canadian government's mandated assimilation policies which outlawed First Nations cultural practices and separated First Nations communities from their land*
- *The Residential School system followed by Indian Day Schools that removed First Nations children from their homes and forbade them to speak their languages*
- *Social, industrial and cultural pressures from the dominant English-speaking society*
- *Exclusion of First Nations languages from government, commerce, industry, arts, education and media*

(First Peoples' Cultural Council 2014:2).

In order to hold a job, and participate in the European-introduced economy of BC, Eastern Secwepemc Peoples have been forced to adopt a way of life which relies on certain assumptions – namely that English is required for day-to-day dealings outside of one's home. Historically Canada has been an inhospitable climate for maintaining Indigenous languages, however, the revitalization movement which began, in the 1980s in Secwepemc Territories, continues, through the actions of the T'selcéwtqen Clleqmél'ten/Chief Atahm School. The First Peoples' Cultural Council continues to publish online about the state of the Secwepemc language and culture, and encourage initiatives to maintain it (FPCC 2016).

Secwepemctsín, in its various dialects, is the language spoken by the Secwepemc, or Shuswap, Peoples. Secwepemctsín is an Interior Salish family language. See section F of this report for more details about the dialects. In British Columbia, the active suppression of Indigenous

[24] At these schools, in operation until 1978 and 1970, respectively, students were punished by strapping and received corporal punishment for speaking languages other than English. Allegations of extensive sexual, physical, mental, and Spiritual abuse and attempted suicides of children while attending these schools and adult survivors have been reported (Indian Residential School Sources 2014 see Indigenous Foundation 2009).

languages, through the residential school system, and making it illegal to practice one's culture, has created a situation where very few elders are available to mentor the next generation in learning the Secwepemctsín language.

First Voices is a project run by The First Peoples' Cultural Council (FPCC), which collects and tabulates statistics regarding the state of Indigenous languages within the province of British Columbia (see also the Canadian Government census statistics quoted in this report, Section 12.2.4). The low response rate on the government census surveys, in addition to the statistical measures employed by the Canadian Government, to deliberately distort the numbers for privacy reasons, means that the First Voices statistics represent a more accurate, on-the-ground, assessment of the number of people who currently speak Secwepemctsín[25]. According to the 2014 report on the state of First Nations' languages in BC, there were 197 Status Native fluent speakers of Secwepemctsín in 2014, compared to 249 Status Native fluent speakers of Secwepemctsín in 2010, in addition, 1187 Status Native semi-speakers of Secwepemctsín in 2014 were reported (there is no corresponding number for 2010 on this statistic) (First Peoples' Cultural Council 2014b:25). In 2014 this meant approximately 2% of the Secwepemc Status Native population spoke fluent Secwepemctsín (First Peoples' Cultural Council 2014b:35). The breakdown of fluent speakers for the communities discussed in this report are listed in Table 66, 67, and 68 below.

Table 66: Number of Secwepemctsín speakers/learners divided by Band.

First Nations Band	Fluent	Understand or Speak Somewhat	Learning Speakers
Kenpesq't (Shuswap)	1	2	0
Neskonlith	8	22	23
Sexqeltqín (Adams Lake)	10	90	96
Simpcw	9	147	59
Skw'lax (Little Shuswap)	5	20	52
Splatsin	8	14	63

Table 67: Population, divided by Band.

First Nations Band	Population, as of July, 2016 (AANDC 2016)
Shuswap	262
Neskonlith	657
Adams Lake	796
Simpcw	716
Little Shuswap Lake	349
Splatsin	893

[25] For example, in order to maintain privacy in communities with low populations where it may be easy to identify an individual, Canada census statistics may be rounded to 5-10%, which can be a significant distortion of numbers when dealing with communities of approximately 300 persons. See stats Canada website for further information about their privacy policy (AANDC 2016). First Peoples' does not have a mandate to conceal individuals represented by the statistics regarding who is speaking the language, therefore it is possible for language revitalizers to simply count how many people are attending classes, asking for resources, etc. FPCC is a BC crown corporation that provides programs that promote and fund language revitalization. For example, "Language Champions" are listed on the website for Secwepemctsín which identifies some fluent speakers and learners by name (First Peoples' 2016).

Table 68: Percentage of Secwepemctsín speakers/learners divided by Band.

First Nations Band	Percentage of speakers/learners (FPCC 2016) within the registered bands' populations (AANDC 2016)
Kenpesq't (Shuswap)	1%
Neskonlith	8%
Sexqeltqín (Adams Lake)	24%
Simpcw	30%
Skw'lax (Little Shuswap Lake)	22%
Splatsin	9%

In spite of the dire state of Indigenous languages in BC, and worldwide, and the decrease of fluent speakers, there has been a surge of interest in learning Secwepemctsín. Comprehensive Community Plans for Shuswap Band (2016), Little Shuswap Lake Indian Band (2015), and Splatsin (2013), and Adams Lake Indian Band (2015) all identify language revitalization as a top priority, and propose initiatives to encourage the speaking of Secwepemctsín[26]. For example:

- *Integrate culture into more community events and practices, and hold more ceremonies and cultural gatherings. Splatsin (2013:ii)*
- *Continue to offer and promote language classes for all members, regardless of age.*
- *Incorporate language and culture (i.e. drumming) into daycare and after-school programs.*
- *Encourage volunteers to help with fostering language and culture in the community.*
- *Ensure that language teachers are qualified and have access to the technology that will help facilitate easier learning.*
- *Consider developing and offering Parent-Child Mother Goose-type program in Secwepemc. Little Shuswap Lake Indian Band (Urban Systems 2015:8).*
- *Continue to teach, share, and spread knowledge of Secwepemctsín and the local dialect;*
- *Work towards increasing access to cultural education and language classes for children of all ages; Support all members (including off-reserve) in accessing language learning programs including online services and classes via Skype; Examine the possibility of using a new name for the community;… (Shuswap Band 2016:18).*

These initiatives will help in revitalizing Secwepemctsín. Indigenous language speakers have the right to learn and speak their language, and furthermore, by ensuring the continuation of this language the rights of future generations are also safeguarded, to a degree. The fundamental importance, reflected in the Comprehensive Community Plans, in protecting the right to language, is also identified internationally in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), (Office of the High Commissioner for Human Rights 2008). For example, Article 13.1 states that:

> *Indigenous peoples have the right to revitalize, use, develop and transmit to future generations their histories, languages, oral traditions, philosophies, writing systems and*

[26] Neskonlith's Comprehensive Community Plan is in progress, publication pending.

> *literatures, and to designate and retain their own names for communities, places and persons. (Office of the High Commissioner for Human Rights 2008:7).*

The "First Peoples' Heritage, Language and Culture Act of BC" also identifies that the province of BC wishes to: "Protect, revitalize and enhance First Nations heritage, language, culture and arts," (First Peoples' Heritage and Language and Culture Act 1996, up to date as of 2012).

The Secwepemc Nation has actively maintained their commitment to their culture and language through education. One of the most successful undertakings to encourage the speaking of Secwepemctsín, and the retention of it as a living language, is the immersion school, the first in BC. The opening of this school marked the emergence from the residential school era by returning control of education to the community.

T'selcéwtqen Clleqmél'ten, a.k.a. Chief Atahm School, was initially inspired by a Māori initiative in New Zealand, *Te Kohanga Reo*. Now with multiple centres in Australia and New Zealand, the concept is to create a language nest for young children to be immersed in the Māori language and culture. For example:

> *Kohanga Reo is an early childhood education and care (ECE) centre where all education and instruction is delivered in te reo maori (Maori language). At Kohanga Reo mokopuna (children) are totally immersed in Maori language and tikanga (culture) from birth through to the age of six. (Te Kōhanga Reo 2016).*

In the same way, T'selcéwtqen Clleqmél'ten, Chief Atahm School has created a program where students learn Secwepemctsin, as well as traditional Secwepemc approaches to learning, and BC curriculum topics. In addition to offering day-school students a K-10 program with varying levels of complete or partial immersion, there are additional programs for learners from six-months of age to adult learners, including support for online learners and teachers at other institutions who require training and resources for setting up their own language programs.

In 1987 parents from Adams Lake Indian Band, Neskonlith Indian Band, and Little Shuswap Lake Indian Band, worked together to create a language nest for Secwepemc children 0-5 years of age, this in turn lead to the creation of a Secwepemc immersion school (T'selcéwtqen Clleqmél'ten, Chief Atahm School website 2016). (See also the community profile for Adams Lake in this report, section 12.1.1.f.). The UNDRIP (Article 14.1) states that Indigenous people have a right to teach in their language:

> *Indigenous peoples have the right to establish and control their educational systems and institutions providing education in their own languages, in a manner appropriate to their cultural methods of teaching and learning. (UNDRIP 2014:7).*

And furthermore, in Article 14.3:

> *States shall, in conjunction with indigenous peoples, take effective measures, in order for indigenous individuals, particularly children, including those living*

> *outside their communities, to have access, when possible, to an education in their own culture and provided in their own language. (UNDRIP 2014:7).*

The T'selcéwtqen Clleqmél'ten, Chief Atahm School, explains that their learning strategy is holistic, the language is taught embedded in teaching techniques which encompass Secwepemc cultural values which goes well beyond mere route memory of a linguistic system.

> *The school was founded in 1991 and is grounded in the belief that knowledge of the language, traditional practices and beliefs of the Secwepemc will help develop a strong and healthy community, Students will be prepared for today's world and will help protect the earth for the Tellgelmucw, "the people to come". (T'selcéwtqen Clleqmél'ten, Chief Atahm School website 2016).*

The important links between language, cultural teachings, and overall health of Indigenous communities is recognized worldwide:

> *This learning space has the powerful potential to build identity, well being and belonging. It also aids the prevention of Maori disengaging; or even rejecting the existing educational systems offered today. Being connected to the educational system through Te Kohanga Reo creates a stronger sense of belonging between the akonga to their culture, language and arts but also to their extended Maori community. (Te Kōhanga Reo 2016).*

Language is also linked with the landscape, and by revitalizing the language, people are able to make a direct connection to the landscape of which they are part. In this way, knowledge of place names and TEK (Traditional Ecological Knowledge) are an interconnected part of cultural restoration which goes hand-in-hand with language revitalization.

A language cannot be lost without also losing the information which is contained within it and is specific to that culture and that language. Retention of language diversity is of culturally-universal importance, as has been identified by other researchers. This is an issue of global importance, beyond that of the descendant community of the Peoples' who spoke a given language.

> *Language is the way a culture is transmitted—it represents the identity of a people and holds cultural, historical, scientific and ecological knowledge. When a language is lost, we all lose out on the knowledge held within it and the unique way its speakers view the world. (First Peoples' Cultural Council 2014).*

When interviewed about the state of the language Elders, and other knowledgeable community members, from Adams Lake Indian Band had this to say about the language:

> *"More just in the last couple of years people have begun to say 'I know my language' ... A lot of people or individuals understand more, the people that understood more at one time wouldn't admit they understood. Now they are saying 'I understand.'…The Elders, mid-fifties to sixties, I know six people that understand the language well, whereas five years ago they wouldn't admit they*

understood." Adams Lake Elder 2016 ID1519 (Behr et al. 2016 publication pending).

"They are learning [Secwepemctsín] in the school now, but it is only, I guess you would say, more level one. It is not regular; it is not about learning the full language, it is about self-esteem. We have some language even if it is one or two words."
Adams Lake Elder 2016 ID1519 (Behr et al. 2016 publication pending).

12.2.5 HEALTH EFFECTS

Secwepemc Perspectives on Health and Cumulative Effects

As the above section illustrates, the ability to learn and speak one's language, has a significant effect on peoples' mental health. While it is possible to write about general impacts to cultural heritage and health from industrial development, a project-specific study is required, in order to adequately assess project impacts. Data gaps exist, because research has not been specific to Revelstoke 6. All six Secwepemc Bands have requested funding from BC Hydro to conduct CHA and/or LUOS research specific to the LSA in order to address the large gaps in data and better understand the effects of the Project on their rights. Simpcw notes that they have mostly being left out of the consultation process for decades, it is crucial that Simpcw First Nation be funded for this[27]. For example, as was mentioned earlier in this report, the entire community is potentially affected when further destruction of fishing areas occurs. Family structures, and the passing on of TEK to children is negatively impacted with the continual infringement on important areas (e.g. traditional hunting, fishing and gathering sites). In light of this, more information would be provided, upon conducting interviews, researching, and reporting, as part of a CHA and/or LUOS.

Furthermore, within the context of major industrial developments, such as dams, which have the potential for significant impacts on the Secwepemc territory, the risks to human health and health of ecosystems requires additional research. Risks to health are associated with the inability to access or participate in traditional resource harvesting activities. It has been determined that for natural resource-based societies, physical risks, or even perceived dangers to peoples' health posed by environmental pollutants, have measurable effects on cultural continuity (Alfred, McCarthy and Spak 2006). Thus, the linkages between perceived health risks and changes in culture need to be considered. The overall negative physical and mental health impacts of such changes in lifestyle not only result from the abandonment of traditional activities and the myriad

[27] See Simpcw FN (2009:2, section 2.7) "BC Hydro has been occupying the Simpcw's territory since the 1970s, when it constructed the Original Project [Mica 5&6] without any consultation with the Simpcw. The Simpcw were completely left out of any discussions surrounding the terms of the Treaty, as well as, the construction and operation of the Original Project. The flooding of the Columbia River and construction of the Original Project had devastating consequences to the Simpcw's territory and traditional way of life. These past infringements still need to be addressed today, especially in light of the proposed Project. Further, any discussions with respect to the Project must necessarily include addressing the impacts resulting from the Original Project…."

of long-term intergenerational effects this has on Indigenous Nations such as the Secwepemc, but also from the simple fact that the food that tends to be available to replace “traditional food” is generally high in fats and sugars and lacks the nutrients, high-quality proteins, minerals and vitamins of traditional foods (Alfred, McCarthy and Spak 2006).

12.2.6 MITIGATION MEASURES

Mitigation measures are as per the measures described in Section 12.1.h. Description of mitigation measures to avoid or reduce effects on Secwepemc Title & Rights.

12.2.7 RESIDUAL ADVERSE EFFECTS (POST MITIGATION)

Residual adverse effects are as per the effects described in Section 12.1.i. Characterization of the residual adverse effects on Secwepemc Title & Rights after mitigation.

12.2.8 DESCRIPTION OF HOW THESE MATTERS OF CONCERN HAVE BEEN ADDRESSED FROM THE PERSPECTIVE OF THE SECWEPEMC

To a large extent, these matters of concern have not been addressed by BC Hydro through the Environmental Assessment application process (see disclaimer). Further discussions between Secwepemc parties and BC Hydro are warranted.

Issue Summary Table

Table 69: Summary Table of the Results of Aboriginal Consultation related to Aboriginal Interests/Other Matters of Concern to Eastern Secwepemc Peoples

Aboriginal Group	**Consultation Stage / Information Source**	**Issue – Aboriginal Interest**	**Issue – Other Matters of Concern**	**Analysis of Potential Effect**	**Proposed Measures to Avoid, Mitigate or Otherwise Manage Effects**	**Status of Issue** *(e.g. resolved, ongoing resolution, referred to agency, etc.)*
SECWEPEMC-GENERAL	Pre-Application/EA Draft	Loss of fishing areas and opportunities. There is a high level of uncertainty and risk by relying on ongoing effects and monitoring studies, as well as the preliminary (incomplete) results of Part B to establish a baseline condition and to determine residual effects on Secwepemc Title & Rights.	Fish populations are being impacted by changes in flow velocities, habitat suitability/availability, primary productivity, temperature changes, fish passage. Water is also being impacted by increased erosion and sedimentation, and loss of nutrients. Salmon have been extirpated and sturgeon are endangered. Community well being is also negatively impacted through the disconnection to the land in the LSA due to existing activities.	Magnitude – moderate Context – High sensitivity and low resilience Extent – RR, MCR, local, regional, OOS Duration – Permanent Reversibility – Irreversible Frequency- Frequent Likelihood – High Confidence - Low	Conduct a Secwepemc CHA for the LSA to better understand the level of impacts on Secwepemc Title and Rights. Expedite implementation of current mitigation strategies (e.g. fish entrainment, reservoir and stream fertilization, increased shoreline erosion control, etc…). Secure and purchase ecologically significant lands within the LSA for conservation, enhancement and stewardship activities. Soft operating constraints for the Middle Columbia River, Kinbasket Reservoir, and Arrow Lake need to be formalized. Fund Secwepemc community member's education for environmental programs to support Secwepemc involvement in the implementation of the above mitigation strategies. Fund and implement a Columbia Basin Cultural Heritage Management Board to address mitigation activities upstream of Nakusp. Complete within 3 years of the issues of the EA certificate, a compensation	Ongoing resolution required through bilateral agreements with Secwepemc Parties and BC Hydro.

Aboriginal Group	Consultation Stage / Information Source	Issue – Aboriginal Interest	Issue – Other Matters of Concern	Analysis of Potential Effect	Proposed Measures to Avoid, Mitigate or Otherwise Manage Effects	Status of Issue *(e.g. resolved, ongoing resolution, referred to agency, etc.)*
					agreement that fully addressed the non-mitigable impacts to non-archaeological cultural heritage resources impacted by operation of the Revelstoke 6 facility, including impacts to date and impacts reasonably foreseeable in the future.	
SECWEPEMC-GENERAL	Pre-Application/EA Draft	Loss of plant harvesting areas and opportunities. There is a high level of uncertainty and risk by relying on ongoing effects and monitoring studies, as well as the preliminary (incomplete) results of Part B to establish a baseline condition and to determine residual effects on Secwepemc Title & Rights.	The extent of noxious weed establishment in the project area and from Revelstoke 5 remains unknown. Other information that is poorly understood includes the distribution and abundance of rare plants in the LSA. Alteration of the hydrological regime and increased flow velocities due to the Revelstoke 6 project will promote further erosion of upland and riparian areas, which will result in further loss of vegetation. Community well being is also negatively impacted through the disconnection to the land in the LSA due to existing activities.	Magnitude – moderate Context – High sensitivity and low resilience Extent – RR, MCR, local, regional, OOS Duration – Permanent Reversibility – Irreversible Frequency- Frequent Likelihood – High Confidence - Low	Conduct a Secwepemc CHA for the LSA to better understand the level of impacts on Secwepemc Title and Rights. Expedite implementation of current mitigation strategies (e.g. fish entrainment, reservoir and stream fertilization, increased shoreline erosion control, etc…). Secure and purchase ecologically significant lands within the LSA for conservation, enhancement and stewardship activities. Soft operating constraints for the Middle Columbia River, Kinbasket Reservoir, and Arrow Lake need to be formalized. Fund Secwepemc community member's education for environmental programs to support Secwepemc involvement in the implementation of the above mitigation strategies. Fund and implement a Columbia Basin Cultural Heritage Management Board to address mitigation activities upstream of Nakusp.	Ongoing resolution required through bilateral agreements with Secwepemc Parties and BC Hydro.

Aboriginal Group	Consultation Stage / Information Source	Issue – Aboriginal Interest	Issue – Other Matters of Concern	Analysis of Potential Effect	Proposed Measures to Avoid, Mitigate or Otherwise Manage Effects	Status of Issue *(e.g. resolved, ongoing resolution, referred to agency, etc.)*
					Complete within 3 years of the issues of the EA certificate, a compensation agreement that fully addressed the non-mitigable impacts to non-archaeological cultural heritage resources impacted by operation of the Revelstoke 6 facility, including impacts to date and impacts reasonably foreseeable in the future.	
SECWEPEMC-GENERAL	Pre-Application/EA Draft	Loss of hunting areas and opportunities. There is a high level of uncertainty and risk by relying on ongoing effects and monitoring studies, as well as the preliminary (incomplete) results of Part B to establish a baseline condition and to determine residual effects on Secwepemc Title & Rights.	Loss of habitat (e.g. via inundation or erosion), has been identified as the primary driver in species impacts in the project area. The concepts of ecological and cultural thresholds need to be considered in this assessment. Information gaps related to potential project impacts on wildlife species include information for species at risk such as red-listed badger and grizzly bear. Community well being is also negatively impacted through the disconnection to the land in the LSA due to existing activities.	Magnitude – moderate Context – High sensitivity and low resilience Extent – RR, MCR, local, regional, OOS Duration – Permanent Reversibility – Irreversible Frequency- Frequent Likelihood – High Confidence - Low	Species specific management plans need to be developed to prevent adverse effects on local wildlife species (e.g. mountain goat, migratory birds) and to demonstrate that these species have been appropriately considered in order to avoid potential effects such as abandonment of important natal habitat, mortality or displacement. Conduct a Secwepemc CHA for the LSA to better understand the level of impacts on Secwepemc Title and Rights. Expedite implementation of current mitigation strategies (e.g. fish entrainment, reservoir and stream fertilization, increased shoreline erosion control, etc…). Secure and purchase ecologically significant lands within the LSA for conservation, enhancement and stewardship activities. Soft operating constraints for	Ongoing resolution required through bilateral agreements with Secwepemc Parties and BC Hydro.

Aboriginal Group	Consultation Stage / Information Source	Issue – Aboriginal Interest	Issue – Other Matters of Concern	Analysis of Potential Effect	Proposed Measures to Avoid, Mitigate or Otherwise Manage Effects	Status of Issue *(e.g. resolved, ongoing resolution, referred to agency, etc.)*
					the Middle Columbia River, Kinbasket Reservoir, and Arrow Lake need to be formalized. Fund Secwepemc community member's education for environmental programs to support Secwepemc involvement in the implementation of the above mitigation strategies. Fund and implement a Columbia Basin Cultural Heritage Management Board to address mitigation activities upstream of Nakusp. Complete within 3 years of the issues of the EA certificate, a compensation agreement that fully addressed the non-mitigable impacts to non-archaeological cultural heritage resources impacted by operation of the Revelstoke 6 facility, including impacts to date and impacts reasonably foreseeable in the future.	
SECWEPEMC-GENERAL	Pre-Application/EA Draft	Loss of medicine gathering sites and opportunities. There is a high level of uncertainty and risk by relying on ongoing effects and monitoring studies, as well as the preliminary (incomplete) results of Part B to establish	Additional field efforts need to be made within the project area to update noxious weed information and rare plant information within prescribed growing seasons (early to mid-growing season), as well as known medicinal	Magnitude – moderate Context – High sensitivity and low resilience Extent – RR, MCR, local, regional, OOS Duration – Permanent Reversibility – Irreversible Frequency- Frequent Likelihood – High	Conduct a Secwepemc CHA for the LSA to better understand the level of impacts on Secwepemc Title and Rights. Expedite implementation of current mitigation strategies (e.g. fish entrainment, reservoir and stream fertilization, increased shoreline erosion control, etc…). Secure and purchase ecologically significant lands	Ongoing resolution required through bilateral agreements with Secwepemc Parties and BC Hydro.

Aboriginal Group	Consultation Stage / Information Source	Issue – Aboriginal Interest	Issue – Other Matters of Concern	Analysis of Potential Effect	Proposed Measures to Avoid, Mitigate or Otherwise Manage Effects	Status of Issue *(e.g. resolved, ongoing resolution, referred to agency, etc.)*
		a baseline condition and to determine residual effects on Secwepemc Title & Rights.	gathering areas within the LSA. Community well being is also negatively impacted through the disconnection to the land in the LSA due to existing activities.	Confidence - Low	within the LSA for conservation, enhancement and stewardship activities. Soft operating constraints for the Middle Columbia River, Kinbasket Reservoir, and Arrow Lake need to be formalized. Fund Secwepemc community member's education for environmental programs to support Secwepemc involvement in the implementation of the above mitigation strategies. Fund and implement a Columbia Basin Cultural Heritage Management Board to address mitigation activities upstream of Nakusp. Complete within 3 years of the issues of the EA certificate, a compensation agreement that fully addressed the non-mitigable impacts to non-archaeological cultural heritage resources impacted by operation of the Revelstoke 6 facility, including impacts to date and impacts reasonably foreseeable in the future.	
SECWEPEMC-GENERAL	Pre-Application/EA Draft	Loss of spiritual/ceremonial sites and opportunities. There is a high level of uncertainty and risk by relying on ongoing effects and monitoring studies,	Spiritual areas represent the places to connect to the land and are foundations of Secwepemc culture. Community well being is also negatively impacted through the	Magnitude – outside of range of natural variation Context – High sensitivity and low resilience Extent – RR, MCR, local, regional, OOS Duration – Permanent Reversibility – Irreversible	Conduct a Secwepemc CHA for the LSA to better understand the level of impacts on Secwepemc Title and Rights. Expedite implementation of current mitigation strategies (e.g. fish entrainment, reservoir and stream fertilization, increased	Ongoing resolution required through bilateral agreements with Secwepemc Parties and BC Hydro.

Aboriginal Group	Consultation Stage / Information Source	Issue – Aboriginal Interest	Issue – Other Matters of Concern	Analysis of Potential Effect	Proposed Measures to Avoid, Mitigate or Otherwise Manage Effects	Status of Issue *(e.g. resolved, ongoing resolution, referred to agency, etc.)*
		as well as the preliminary (incomplete) results of Part B to establish a baseline condition and to determine residual effects on Secwepemc Title & Rights.	disconnection to the land in the LSA due to existing activities.	Frequency- Frequent Likelihood – High Confidence - Low	shoreline erosion control, etc…). Secure and purchase ecologically significant lands within the LSA for conservation, enhancement and stewardship activities. Soft operating constraints for the Middle Columbia River, Kinbasket Reservoir, and Arrow Lake need to be formalized. Fund Secwepemc community member's education for environmental programs to support Secwepemc involvement in the implementation of the above mitigation strategies. Fund and implement a Columbia Basin Cultural Heritage Management Board to address mitigation activities upstream of Nakusp. Complete within 3 years of the issues of the EA certificate, a compensation agreement that fully addressed the non-mitigable impacts to non-archaeological cultural heritage resources impacted by operation of the Revelstoke 6 facility, including impacts to date and impacts reasonably foreseeable in the future.	
SECWEPEMC-GENERAL	Pre-Application/EA Draft	Loss of habitat sites and opportunities. There is a high level of uncertainty and risk by relying on ongoing effects and	Community well being is also negatively impacted through the disconnection to the land in the LSA due	Magnitude – moderate Context – High sensitivity and low resilience Extent – RR, MCR, local, regional, OOS	Conduct a Secwepemc CHA for the LSA to better understand the level of impacts on Secwepemc Title and Rights. Expedite implementation of current	Ongoing resolution required through bilateral agreements with Secwepemc Parties and BC Hydro.

Aboriginal Group	Consultation Stage / Information Source	Issue – Aboriginal Interest	Issue – Other Matters of Concern	Analysis of Potential Effect	Proposed Measures to Avoid, Mitigate or Otherwise Manage Effects	Status of Issue *(e.g. resolved, ongoing resolution, referred to agency, etc.)*
		monitoring studies, as well as the preliminary (incomplete) results of Part B to establish a baseline condition and to determine residual effects on Secwepemc Title & Rights.	to existing activities.	Duration – Permanent Reversibility – Irreversible Frequency- Frequent Likelihood – High Confidence - Low	mitigation strategies (e.g. fish entrainment, reservoir and stream fertilization, increased shoreline erosion control, etc…). Secure and purchase ecologically significant lands within the LSA for conservation, enhancement and stewardship activities. Soft operating constraints for the Middle Columbia River, Kinbasket Reservoir, and Arrow Lake need to be formalized. Fund Secwepemc community member's education for environmental programs to support Secwepemc involvement in the implementation of the above mitigation strategies. Fund and implement a Columbia Basin Cultural Heritage Management Board to address mitigation activities upstream of Nakusp. Complete within 3 years of the issues of the EA certificate, a compensation agreement that fully addressed the non-mitigable impacts to non-archaeological cultural heritage resources impacted by operation of the Revelstoke 6 facility, including impacts to date and impacts reasonably foreseeable in the future.	
SECWEPEMC-GENERAL	Pre-Application/EA Draft	Measurable disturbance to or loss of		Magnitude – surface disturbance, subsurface disturbance, unauthorized	Immediately develop and implement a mitigation strategy to address impacts to	Ongoing resolution required through bilateral agreements with Secwepemc Parties and

Aboriginal Group	Consultation Stage / Information Source	Issue – Aboriginal Interest	Issue – Other Matters of Concern	Analysis of Potential Effect	Proposed Measures to Avoid, Mitigate or Otherwise Manage Effects	Status of Issue *(e.g. resolved, ongoing resolution, referred to agency, etc.)*
		archaeological sites. There is a high level of uncertainty and risk by relying on ongoing effects and monitoring studies, as well as the preliminary (incomplete) results of Part B to establish a baseline condition and to determine residual effects on Secwepemc Title & Rights.		collection, partial erosion, total erosion Context – High sensitivity and low resilience Extent – RR, MCR, OOS Duration – Permanent Reversibility – Irreversible Frequency- Frequent Likelihood – High Confidence - Low	known archaeological sites in Arrow, Revelstoke and Kinbasket Reservoirs. Complete, within 3 years of the issuance of the EA Certificate, a compensation agreement that fully addresses the non-mitigatable impacts to archaeological resources impacted by operations of the Revelstoke 6 facility in the Arrow, Revelstoke and Kinbasket Reservoirs, including impacts to date and impacts reasonably foreseeable in the future. Complete an inventory of 100% of modeled high (this needs to be defined elsewhere in this document – i.e. if we are only ranking as low or high, give rationale) archaeological potential in the LSA, and a representative sample of low archaeological potential. This includes landforms at risk of bank failure above the reservoir high pool. Expand the archaeological potential model to other reservoirs in Secwepemc Territory. Revisit archaeological sites where inventory is incomplete, and complete inventory. Biannual monitoring of effects on LSA archaeological	BC Hydro.

Aboriginal Group	Consultation Stage / Information Source	Issue – Aboriginal Interest	Issue – Other Matters of Concern	Analysis of Potential Effect	Proposed Measures to Avoid, Mitigate or Otherwise Manage Effects	Status of Issue *(e.g. resolved, ongoing resolution, referred to agency, etc.)*
					sites at low pool. Expand archaeological studies to determine whether effects of Revelstoke 6 impacts the Nakusp Narrows. Fund research regarding identification and investigation of intact sites above full pool. Develop and implement a culturally appropriate adaptive archaeological management plan, with involvement and training of community members to carry out this monitoring. Implement mitigation measures proposed in Part B Off Site compensation for losses to archaeological sites in the LSA (BCH to protect archaeological sites important to Secwepemc by purchasing land upon which sites are located. Fund community members' education for archaeology/anthropology programs.	
SECWEPEMC-GENERAL	Pre-Application/EA Draft	Loss of access to lands and resources. There is a high level of uncertainty and risk by relying on ongoing effects and monitoring studies, as well as the	With the advent of additional development and private land ownership, increased dangers and hazards exist where Secwepemc peoples	Magnitude – moderate Context – High sensitivity and low resilience Extent – RR, MCR, local, regional, OOS Duration – Permanent Reversibility – Irreversible	Conduct a Secwepemc CHA for the LSA to better understand the level of impacts on Secwepemc Title and Rights. Expedite implementation of current mitigation strategies (e.g. fish entrainment, reservoir and	Ongoing resolution required through bilateral agreements with Secwepemc Parties and BC Hydro.

Aboriginal Group	Consultation Stage / Information Source	Issue – Aboriginal Interest	Issue – Other Matters of Concern	Analysis of Potential Effect	Proposed Measures to Avoid, Mitigate or Otherwise Manage Effects	Status of Issue *(e.g. resolved, ongoing resolution, referred to agency, etc.)*
		preliminary (incomplete) results of Part B to establish a baseline condition and to determine residual effects on Secwepemc Title & Rights.	are either discouraged or even prohibited from accessing previously desirable areas for resource harvesting and resource management. .Community well being is also negatively impacted through the disconnection to the land in the LSA due to existing activities.	Frequency- Frequent Likelihood – High Confidence - Low	stream fertilization, increased shoreline erosion control, etc…). Secure and purchase ecologically significant lands within the LSA for conservation, enhancement and stewardship activities. Soft operating constraints for the Middle Columbia River, Kinbasket Reservoir, and Arrow Lake need to be formalized. Fund Secwepemc community member's education for environmental programs to support Secwepemc involvement in the implementation of the above mitigation strategies. Fund and implement a Columbia Basin Cultural Heritage Management Board to address mitigation activities upstream of Nakusp. Complete within 3 years of the issues of the EA certificate, a compensation agreement that fully addressed the non-mitigable impacts to non-archaeological cultural heritage resources impacted by operation of the Revelstoke 6 facility, including impacts to date and impacts reasonably foreseeable in the future.	
SECWEPEMC-GENERAL	Pre-Application/EA Draft	Loss of land and resource management opportunities. There is a high level of	Mass wastage of soils over time via soil creep has considerable implications on the	Magnitude – moderate Context – High sensitivity and low resilience Extent – RR, MCR, local,	Conduct a Secwepemc CHA for the LSA to better understand the level of impacts on Secwepemc Title and Rights. Expedite	Ongoing resolution required through bilateral agreements with Secwepemc Parties and BC Hydro.

Aboriginal Group	Consultation Stage / Information Source	Issue – Aboriginal Interest	Issue – Other Matters of Concern	Analysis of Potential Effect	Proposed Measures to Avoid, Mitigate or Otherwise Manage Effects	Status of Issue *(e.g. resolved, ongoing resolution, referred to agency, etc.)*
		uncertainty and risk by relying on ongoing effects and monitoring studies, as well as the preliminary (incomplete) results of Part B to establish a baseline condition and to determine residual effects on Secwepemc Title & Rights.	health and function of the aquatic and terrestrial communities that support Secwepemc resources. but the additional development and associated proposed operational activity is anticipated to contribute to the lessened ability for Secwepemc peoples to protect the holistic worldview and Secwepemc relationship to the land. Community well being is also negatively impacted through the disconnection to the land in the LSA due to existing activities.	regional, OOS Duration – Permanent Reversibility – Irreversible Frequency- Frequent Likelihood – High Confidence - Low	implementation of current mitigation strategies (e.g. fish entrainment, reservoir and stream fertilization, increased shoreline erosion control, etc…). Secure and purchase ecologically significant lands within the LSA for conservation, enhancement and stewardship activities. Soft operating constraints for the Middle Columbia River, Kinbasket Reservoir, and Arrow Lake need to be formalized. Fund Secwepemc community member's education for environmental programs to support Secwepemc involvement in the implementation of the above mitigation strategies. Fund and implement a Columbia Basin Cultural Heritage Management Board to address mitigation activities upstream of Nakusp. Complete within 3 years of the issues of the EA certificate, a compensation agreement that fully addressed the non-mitigable impacts to non-archaeological cultural heritage resources impacted by operation of the Revelstoke 6 facility, including impacts to date and impacts reasonably foreseeable in the future.	
SECWEPEMC-GENERAL	Pre-Application/EA	Cumulative Impacts on Secwepemc Title	Family structures, and the passing on of TEK	Magnitude – High Context – High sensitivity	Conduct a comprehensive cumulative effects assessment	Ongoing resolution required through bilateral agreements

Aboriginal Group	Consultation Stage / Information Source	Issue – Aboriginal Interest	Issue – Other Matters of Concern	Analysis of Potential Effect	Proposed Measures to Avoid, Mitigate or Otherwise Manage Effects	Status of Issue *(e.g. resolved, ongoing resolution, referred to agency, etc.)*
	Draft	and Rights. There is a high level of uncertainty and risk by relying on ongoing effects and monitoring studies, as well as the preliminary (incomplete) results of Part B to establish a baseline condition and to determine residual and cumulative effects on Secwepemc Title & Rights.	to children is negatively impacted with the continual infringement on important areas (e.g. traditional hunting, fishing and gathering sites). Community well being is also negatively impacted through the disconnection to the land in the LSA due to existing activities.	and low resilience Extent – RR, MCR, local, regional, OOS Duration – Permanent Reversibility – Irreversible Frequency- Frequent Likelihood – High Confidence - High	to better understand past, present, and future impacts on cultural and natural resources in the Upper Columbia River Basin. This assessment would include, but is not limited to, environmental, archaeology, cultural heritage, and socio-economic impacts. Develop and adaptive cultural and natural resource management programs. Key components of these programs would include the development of acceptable thresholds for resource management, development and prioritization of mitigation strategies, implementation of mitigation strategies, and effectiveness monitoring. Again, these programs would include, but are not limited to environmental, archaeology, cultural heritage, and socio-economic mitigation strategies. Conduct a Secwepemc CHA for the LSA to better understand the level of impacts on Secwepemc Title and Rights. Expedite implementation of current mitigation strategies (e.g. fish entrainment, reservoir and stream fertilization, increased shoreline erosion control, etc…). Secure and purchase ecologically significant lands within the LSA for	with Secwepemc Parties and BC Hydro.

Aboriginal Group	Consultation Stage / Information Source	Issue – Aboriginal Interest	Issue – Other Matters of Concern	Analysis of Potential Effect	Proposed Measures to Avoid, Mitigate or Otherwise Manage Effects	Status of Issue *(e.g. resolved, ongoing resolution, referred to agency, etc.)*
					conservation, enhancement and stewardship activities. Soft operating constraints for the Middle Columbia River, Kinbasket Reservoir, and Arrow Lake need to be formalized. Fund Secwepemc community member's education for environmental programs to support Secwepemc involvement in the implementation of the above mitigation strategies. Fund and implement a Columbia Basin Cultural Heritage Management Board to address mitigation activities upstream of Nakusp. Complete within 3 years of the issues of the EA certificate, a compensation agreement that fully addressed the non-mitigable impacts to non-archaeological cultural heritage resources impacted by operation of the Revelstoke 6 facility, including impacts to date and impacts reasonably foreseeable in the future.	

- For IBA discussion, need to consider an internal/external framework agreement on the common structure and content of the IBA; however, each Secwepemc Party will negotiate its own agreement subject to the common structure and content agreed to.

REFERENCES CITED

Oral Sources

Felix, Casmir. 1999. Splatsin Boundary Tour.

Felix, Casmir. 2009. Splatsin Traditional Use Study 2009. Enderby, British Columbia: Splatsin Title and Rights

Felix, Casmir. 2000. Splatsin Needles Research Project 1999, 2000

Williams, Cindy. 2008. Mica 5 and 6 TUS Interview [Video]. Enderby, British Columbia: Splatsin Title and Rights

Written Sources

Aboriginal Affairs and Northern Development Canada (AANDC). 2016. First Nation Profiles. http://fnp-ppn.aandc-aadnc.gc.ca/fnp/Main/Search/SearchFN.aspx?lang=eng, accessed July 18th, 2016.

Adams Lake Indian Band. 2015. SWIXWEYTEC - Our Ancestral Voice, Adams Lake Indian Band Comprehensive Community Strategic Plan.

Adams Lake: C'STELEN Natural Resources Department. n.d. Aboriginal Trails in the Kamloops TSA.

Adams Lake Indian Band, Neskonlith Indian Band, Splatsin, and DM Cultural Services, Ltd. 2013a. Traditional Use Assessment for the Malakwa-Taft Stretch of Highway 1, in Relation to the Four-Laning and Bridge Replacements in that Corridor Final Report (Draft). Adams Lake, BC.

Adams Lake Indian Band, Neskonlith Indian Band, Splatsin, and DM Cultural Services, Ltd. 2013b. Traditional Use Study for the Aline Hill Microwave Capacitor Replacement Final Report. Adams Lake, BC.

Adams Lake Indian Band, Neskonlith Indian Band, Splatsin, and DM Cultural Services, Ltd. 2013c. Traditional Use Assessment for the Malakwa-Taft Stretch of Highway 1, in Relation to the Four-Laning and Bridge Replacements in That Corridor, Preliminary Final Report. Adams Lake, BC.

Adams Lake and Neskonlith Secwepemc. 1999. Land Traditions of the Neskonlith and Adams Lake Shuswap. Preliminary Draft Report Prepared by the Adams Lake and Neskonlith Secwepemc for the BC Ministry of Forests.

Adams Lake Indian Band, and Neskonlith Indian Band. 1998. Traditional Use Study Adams Lake & Neskonlith Indian Bands. Final Report Phase One.

Alexander, Diane. 1997. A Cultural Heritage Overview of the Cariboo Forest Region. Prepared for Cariboo Forest Region, Ministry of Forests, Williams Lake, BC.

Alfred, Taiaike, Theresa McCarthy, and Stella Spak. 2006. Anthropological Report: The Effects of Environmental Contamination on the Mohawks of Akwesasne. https://taiaiake.files.wordpress.com/2015/01/akwesasne-anthropological-report.pdf, accessed September 19, 2016.

Alphonse, Rhandi Tsuilimenik. 2002. Exploring Traditional Secwepemc Fisheries Management and Law. Report Prepared for: Science Council of BC Fisheries Renewal BC Award: FSO1-16. Kamloops, BC: Shuswap Nation Fisheries Commission. SNTC.

Anderson, Kat. 2005. Tending the Wild: Native American Knowledge and the Management of California's Natural Resources. Berkley: University of California Press.

Anderson, Nancy Marguerite (2015). Little Fort on the North Thompson River. In an online blog, "An Accidental Historian, writing about the people who worked in the Territory West of the Rocky Mountains before 1858". Retrieved August 2016: http://nancymargueriteanderson.com/little-fort/

Arcas Associates. 1986. Highway 1 - Four Laning Project Cambie to Revelstoke, BC: Detailed Heritage Resource Inventory and Impact Assessment. Kamloops and Vancouver: Unpublished Report Prepared for the Heritage Conversation Branch, BC Government (1985-14).

Archaeology Branch, Ministry of Forests, Lands, and Natural Resource Operations 1998. British Columbia Archaeological Impact Assessment Guidelines. On file with BC Archaeology Branch, Victoria BC. https://www.for.gov.bc.ca/archaeology/docs/impact_assessment_guidelines/assessment_and_review_process_part1.htm. Accessed November 26, 2016.

2015 Archaeology in British Columbia. https://www.for.gov.bc.ca/archaeology/archaeology_in_BC.htm. Accessed November 26, 2016

Ayotte, Jeremy. 2010. Trans-Canada Highway Realignment at Clanwilliam Overhead: Cultural and Wetland Plant Inventory. Salmon Arm, BC: Unpublished Report Prepared for Splatsin First Nation.

Behr, Towagh, Susannah Machelak, and Aurora Skala. Publication pending. Sexqéltkemc te Secwepemc Lakes Division Cultural Heritage Assessment for the Highway 1 – Kamloops to Alberta Four-Laning Program: Salmon Arm West. (To be published December 2016).

Behr, Towagh, Susannah Machelak, and Aurora Skala. Publication pending. Sexqéltkemc te Secwepemc Lakes Division Cultural Heritage Assessment for the Highway 1 – Kamloops to Alberta Four-Laning Program: Chase Creek Road to Chase West and Jade Mountain. (To be published 2017).

Boas, Franz. 1891. Second General Report on the Indians of British Columbia [Part IV, The Shuswap]. In 60th Report of the British Association for the Advancement of Science for 1890. Pp. 632-647. London.

Borden, Charles. 1956. Results of Two Archaeological Surveys in the East Kootenay Region of British Columbia. Research Studies of the State College of Washington 24(1):73-104.

Bouchard, Randy and Dorothy Kennedy. 2007. Aboriginal Occupation of the Eagle River Mouth. Victoria: Unpublished Report for the Old Town Bay Project (0702905 BC Ltd.).

Bouchard, Randy and Dorothy Kennedy. 2005 [2000]. First Nations' Ethnography and Ethnohistory in British Columbia's Lower Kootenay/Columbia Hydropower Region. Report Prepared for Columbia Power Corporation (Castlegar, BC): Report Prepared by BC Indian Language Project (Victoria, BC).

Bouchard, Randy and Dorothy Kennedy. 1986. Appendix 1: Indian Knowledge and Utilization of the Sicamous-Revelstoke Area. In Highway 1 - Four Laning Project Cambie to Revelstoke, BC: Detailed Heritage Resource Inventory and Impact Assessment, by Arcas Associates. Kamloops and Vancouver: Unpublished Report Prepared for the Heritage Conversation Branch, BC Government (1985-14).

Bouchard, Randy and Dorothy Kennedy. 1979. Shuswap Stories. Vancouver: CommCept Publishing.

British Columbia (BC). 2016. Coast Forest Region Version 6 Provincial Biogeoclimatic Zones. https://www.for.gov.bc.ca/rco/research/eco/bec_web/docs/BAFAun.htm, accessed August 30, 2016.

British Columbia. 1916. Report of the Royal Commission on Indian Affairs for British Columbia. Victoria: Acme Press.

British Columbia (BC) Hydro. 2016. Revelstoke Generating Station Unit 6 Project Factsheet (February 2016). Retrieved from https://a100.gov.bc.ca/appsdata/epic/documents/p400/1457453247825_yxL3Wp1LpH6PBy8VhVcczqhLmnrJhLyXnCZjJqs030VlGKmPzJnB!1808694126!1457452488299.pdf Accessed April 19, 2016.

British Columbia. 2016. Fisheries Inventory, 1:50,000 BC Watershed Atlas Maps, BC Watershed Groups. http://www.env.gov.bc.ca/fish/watershed_atlas_maps/maps/index.html, accessed August 30, 2016.

British Columbia and Canada. 1876-1910. Materials produced by the Joint Indian Reserve Commission and Indian Reserve Commission, 1876-1910. Victoria and Ottawa: Unpublished archival collections held at the Union of BC Indian Chiefs and available on their website.

British Columbia Ministry of Attorney General. 2011. Harper Creek: Ethnographic and Historic Sources. Unpublished report.

British Columbia Data Catalogue. 2016. Biogeoclimatic Map – Generalized (1:250K). 2016. https://catalogue.data.gov.bc.ca/dataset/biogeoclimatic-map-generalized-1-250k, accessed August 30, 2016.

Bussey, Jean. 1978. Revelstoke Archaeology Project: Final Report (1977-18). Unpublished report on file at the BC Archaeology Branch, Victoria.

Chisholm, Brian S., and D. Erle Nelson. 1983. An Early Human Skeleton from South-Central British Columbia: Dating and Bioarchaeological Inference. Canadian Archaeological Association / Association Canadienne d'Archéologie 7 (1): 85–86.

Choquette, Wayne. 1997. Archaeological Overview Assessment for the Invermere Forest District, Contract Report. Unpublished report on file at the BC Archaeology Branch, Victoria. Retrieved from:
www.friendsofkootenay.ca/sites/default/files/Choquette%201997.pdf

Choquette, Wayne. 2008. Archaeological Overview Assessment: Monitoring Program No. CLBMON-51; Kinbasket and Revelstoke Reservoirs. Prepared for BC Hydro.

Cooperman, Jim. 1989. The History of Adams Lake, Part I: The People of Sxste' Un." Shuswap Chronicles 2: 8.

Cormier, Raymond. 2015. Splatsin and Shuswap Indian Band Cultural Heritage Overview Assessment for the Jordan Pit Area.

Cox, Ross. 1831. The Columbia River, Scenes and Adventures during a Residence of Six Years on the Western Side of the Rocky Mtns, among various Tribes of Indians Hitherto Unknown. Henry Colburn and Richard Bentley, London. Retrieved, October 2016: https://books.google.ca/books?id=Li8TAAAAYAAJ&pg=PA25&source=gbs_toc_r&cad=3#v=onepage&q&f=false

Cybulski, Jerome S., Donald E. Howes, James C. Haggarty, and Morley Eldridge. 1981. An Early Human Skeleton from South-Central British Columbia: Dating and Bioarchaeological Inference. Canadian Journal of Archaeology/Journal Canadien d'Archéologie, 49–59.

Dawson, George M. 1891. Notes on the Shuswap People of British Columbia. Transactions of the Royal Society of Canada Section II:3-46.

Dehart. 1988. In Wayne Choquette's 1997 Archaeological Overview Assessment for the Invermere Forest District, Contract Report. Unpublished report on file at the BC Archaeology Branch, Victoria.

DM Cultural Services, Ltd. 2014 (DMCS). Cultural Heritage Assessment for Sexqéltkemc Te Secwepemc and the Shuswap Band Uses of the Illecillewaet Valley, British Columbia. Unpublished report prepared for Sexqéltkemc Te Secwepemc and the Shuswap Band.

DM Cultural Services, Ltd (DMCS). 2012. Traditional Use Assessment of McKay Creek: A Response to McKay Creek Power Company's Run-of-River Hydro Project Proposal. Mill Bay, BC: Unpublished Report Prepared for Splatsin.

DM Cultural Services, Ltd (DMCS). and Splatsin. 2011. Traditional Use Study for the Trans-Canada Highway Clanwilliam Area in Response Highway Realignment at Clanwilliam Overhead. Unpublished report.

Donald, Rosemary. 2016. Transcript of Rosemary Donald Interview by Ian Cameron on 20 April 2016 at Simpcw Archives. On file at Simpcw FN Archives, Chu Chua, BC.

Elias, Peter Douglas (Black Diamond Research). 2009. Secwepemc Use of Lands and Resources in the Mica 5-6 Project Area. Unpublished Report Prepared for the Adams Lake Indian Band.

Ernst, Andrea. December 2002. Columbia WUP Culture and Heritage Report (Upper Columbia Region). Unpublished Ms.: Prepared for the Columbia Water Use Planning Process.

Ernst, Andrea. 2000. Little Shuswap Indian Band Traditional Use Study. Final Draft.

Eustache, Dodie. 1999. List of Simpcwul'ecw Plant Names and Expressions in Secwepemctsin. Unpublished list on file at the Simpcw Archives, Chu Chua (digital copy, Ethnobotany).

Evans, Clint. 2009. Historical Overview of Aboriginal Territories and Land Use in Southeastern British Columbia, 1800-1905. Unpublished report for Natural Resources Canada, on file at Simpcw Archives (hard copy).

Favrholdt, Ken. 2000. Aboriginal Trails in the Kamloops TSA: A Report and Inventory for Adams Lake Indian Band. Kamloops, BC.

Favrholdt, Ken. 2009. Report on Trails of Aboriginal Interest to Sexqéltkemc (Lakes Division) Within the BC Hydro MICA 5-6 Project Area, Final Draft.

Favrholdt, Kenneth. 2014. Report on Aboriginal Trails Along the Trans-Canada Highway Corridor Between Chase and the Continental Divide, Draft. Osoyoos, BC.

First Peoples' Cultural Council. 2014a. Report on the Status of B.C. First Nations Languages 2014, Second Edition, Fact Sheet. http://www.fpcc.ca/files/PDF/Language/2014_Language_Report_Fact_Sheet.pdf, accessed September 19, 2016.

First Peoples' Cultural Council. 2014b. Report on the Status of B.C. First Nations Languages 2014. http://www.fpcc.ca/files/PDF/Language/FPCC-LanguageReport-141016-WEB.pdf, accessed September 19, 2016.

First Peoples' Heritage and Language and Culture Act. RSBC 1996. Chapter 147. http://www.bclaws.ca/Recon/document/ID/freeside/00_96147_01, accessed September 19, 2016.

First Peoples' Language Map of British Columbia. 2016. Secwepemctsín. http://maps.fphlcc.ca/secwepemctsin, accessed July 29, 2016.

Fish Creek Consulting. 2007. Interim Report on the Shuswap Indian Band Traditional Use Research.

Fortier, Charli. 2011. Upper Columbia River Fisheries Survey, Final Report, Canadian Columbia River InterTribal Fisheries Commission (CCRIFC). Unpublished report on file at the Simpcw Archives (digital copy, Dodie Eustache files).

HBC. 1852. Paul Fraser, Correspondence Outward, A/C/40/F862, BC Archives. [A note on the back says HBC B.235/c/1 so the letter might also be found there.] Retrieved 2015: http://nancymargueriteanderson.com/little-fort/

Historic Canada. 2016. http://www.thecanadianencyclopedia.ca/en/article/gore-creek-skeleton-an-early-human-in-north-america/ accessed October 7, 2016.

Hunn, Eugene S., Nancy J. Turner, and David H. French. 1998. Ethnobiology and Subsistence. In Handbook of North American Indians. William C. Sturtevant and Deward E. Walker Jr., eds. Washington: Smithsonian Institute.

Ignace, Marianne B. 2000. Anthropological Expert Witness Report: Regina v. Lebourdais et al, Regina v. Deneault et al. Unpublished Ms.: Prepared for Rush Crane Guenther.

Ignace, Marianne B.1998. Shuswap. In Handbook of North American Indians, Vol. 12: Plateau.
Deward E. Walker, ed. Washington DC: Smithsonian Institution Press. Pp. 203-219.

Ignace, Marianne B. and Ronald Ignace. 2004. The Secwepemc: Traditional Use and Rights to Land. In Native Peoples: The Canadian Experience. R. B. Morrison and C. R. Wilson, eds. Don Mills: Oxford University Press.

Ignace, Marianne, and Ron Ignace. 2011. Traditional Knowledge, Land Use and Occupancy Study – Highway 1 Upgrade Phase 1 - Monte Creek to Chase Area. Preliminary Report Prepared for Neskonlith Indian Band. Savona, B.C.

Ignace, Marianne Boelscher, Nancy Turner, and Sandra Leslie Peacock, eds. Publication pending. Secwepemc People & Plants: Research Papers in Shuswap Ethnobotany, Contributions in Ethnobiology. Tacoma, WA: Society of Ethnobiology.

Ignace, Ronald E. 2008 Our Oral Histories are Our Iron Posts: Secwepemc Stories and Historical Consciousness. Simon Fraser University, PhD Dissertation.

Indigenous Foundation. 2009. The Residential School System. First Nation
Studies Program, University of British Columbia.
http://indigenousfoundations.arts.ubc.ca/home/government-policy/the-residential-school-system.html, accessed August 8, 2016.

Johnsen, Timothy Frederick. 2004. Late Glacial Lakes of the Thompson Basin: Southern Interior of British Columbia: Paleogeography and Paleoenvironment. Master of Science: Department of Geography, Simon Fraser University.

Johnsen, Timothy, and Tracy Brennand. 2006. The Environment in and around Ice-Dammed Lakes in the Moderately High Relief Setting of the Southern Canadian Cordillera. Boreas 35 (1): 106–25. doi:10.1080/03009480500359145.

Jules, Nancy (2005). Copies of Sketch Maps of E&W, Kootenay 1902. On file in Nancy Jules Collection, at Simcpw FN Archives, Chu Chua, BC.

Kennedy, Dorothy I. D. and Randall T. Bouchard. 1998. Northern Okanagan, Lakes, and Colville. In Handbook of North American Indians, Vol. 12: Plateau. Deward E. Walker, ed. Pp. 238-252. Washington DC: Smithsonian Institution Press.

Ktunaxa/Kinbasket Tribal Council. 1998. Golden Peaks Resort Traditional Use Study. Cranbrook, BC.

Lawhead, Stephen.1986. Appendix II: Indian Place Names and Resource Utilization Sites in the Sicamous-Revelstoke Area as Known by Francis Thomas. In Highway 1 - Four Laning Project Cambie to Revelstoke, BC: Detailed Heritage Resource Inventory and Impact Assessment. Arcas Associates, ed. Kamloops and Vancouver: Unpublished Report Prepared for the Heritage Conservation Branch, BC Government (1985-14). Pp. 91-95.

LeBourdais, Sunny. 2009. Tult: Transformation of Energy into Matter. n.p.: Unpublished Report Prepared by Sexqéltkemc: The Lakes Division of the Secwepemc Nation.

Lewis, Henry T., and Theresa A. Ferguson. 1988. Yards, Corridors, and Mosaics: How to Burn a Boreal Forest. Human Ecology 16(1): 57–77.

Lindsay, Bob. 1994. Arrow Lakes (Reservoir) Historical Report and Backgrounder, Impact of Dams and BCE Fisheries Management Direction. Draft.

Little Shuswap Lake Indian Band. 2016. The Little Shuswap Indian Band. http://www.lslib.com/, accessed July 19, 2016.

Mann, Charles C. 2006. 1491: New Revelations of the Americas Before Columbus. New York: Vintage.

McIlwraith, Thomas (Tad). 2016. Personal Communication, June 30, 2016.

McIlwraith, Thomas, and Raymond Cormier. 2015. MAKING PLACE FOR SPACE: Land Use and Occupancy Studies, Counter-Mapping, and the Supreme Court of Canada's Tsilhqot'in Decision." BC Studies, no. 188: 35.

Meidinger, Dellis Vern, and Jim Pojar, eds. 1991. Ecosystems of British Columbia. Special Report Series, 6. Victoria, B.C.: Research Branch, Ministry of Forests.

Merk, Frederick, editor. 1931. Fur and Trade Empire, George Simpson's Journal: Remarks connected with the fur trade in the course of a voyage from York Factory to Fort George and back to York Factory, 1824-1825. Harvard University Press, Cambridge.

Millennia Research Limited. 2012. BC Hydro Arrow Lakes Reservoir CLBMON#50 Heritage Monitoring Wind and Wave Erosion Study Year 3 Report. Victoria, BC.

Ministry of the Attorney General (BC). 2009. Secwepemc: A Review of the Historical and Ethnographic Sources. Victoria: Unpublished Report.

Ministry of Attorney General, Legal Services Branch, Aboriginal Research Division. 2012. Arrow Lakes: Review of Ethnographic and Historical Sources.

Ministry of Justice (BC). August 2012. Secwepemc Nation: A Brief Ethnohistoric Overview of the Eastern Divisions. Unpublished Report Prepared by the Legal Services Branch.

Moberly, Walter. 1865a. Columbia River Exploration (1865-66): Instructions, Reports, and Journals Related to the Government Exploration of the Country Lying Between the Shuswap and Okanagan Lakes and the Rocky Mountains. Victoria: Government Printing Office.

Moberly, Walter. 1865b. Royal Engineers Collection Tray 1, Vol. 2, Book 3, 1865 by Moberly. Maps and Plans Vault, Royal Engineer Collections Tray FB Book 3/1784. Land Title and Survey Authority of British Columbia, Victoria, B.C.

Moberly, W. 1866. Columbia River Exploration 1865. Govt Printing Office, New Westminster.

Mohs, Gordon. 1977. Arrow Lakes Reservoir Region Post Inundation Studies of the Archaeological Resource (Heritage Inspection Permit #1977-011). Report on file at the Archaeology Branch, Victoria BC.

Morrissey, Greg. 2009. Tools and Change: The Shift from Atlatl to Bow on the British Columbia Plateau. M.A. Thesis, Department of Archaeology, Simon Fraser University.

Murton, P. and Ferguson, G. 1973. Report of an archaeological Survey of Proposed BC Hydro Generating Sites at Seven Mile (Pend Oreille River), High Revelstoke (Columbia River) and Site One (Peace River; 1973-0028d). Unpublished report on file at the BC Archaeology Branch, Victoria.

Nordquist, Dave. Personal communication October 6, 2016.

Palmer, Gary. 1975. Shuswap Indian Ethnobotany. Syesis 8: 29-81.

Palmer, Gary B. 1975. Cultural Ecology in the Canadian Plateau: Pre-Contact to Early Contact Period in the Territory of the Southern Shuswap Indians of British Columbia. Northwest Anthropological Research Notes 9(2): 199-245.

Peacock, Sandra, and Nancy J. Turner. 1998. Just Like a Garden: Traditional Plant Resource Management and Biodiversity Conservation on the B.C. Plateau. In Biodiversity and Native North America. P. Minnis and W. Elisens, eds. Norman: University of Oklahoma Press.

Quaaout Lodge & Spa. 2016. Welcome to The Quaaout Lodge & Spa at Talking Rock Golf Resort. http://www.quaaoutlodge.com/, accessed July 20, 2016.

Ray, Verne F. 1939. Cultural Relations in the Plateau of Northwestern America. Los Angeles: Southwestern Museum.

Rayburn, Alan. 2001. Naming Canada: Stories About Canadian Place Names. Rev. & Expanded. Toronto, Ont: University of Toronto Press.

Robertson, Brian D. 2009. Appendix 7: The Ktunaxa Nation and the Upper Columbia Valley from Revelstoke to Columbia Lakes: A Survey of Historical Documentation Relating to Aboriginal Use and Interest, on behalf of the Ktunaxa Nation Council. In BC Hydro Mica Unit 5 and 6 Project EACA Reviews. KNC Review of draft First Nations Consultation Report and Outstanding Consultation and Accommodation Requirements. Retrieved October 13, 2016: https://a100.gov.bc.ca/appsdata/epic/documents/p321/d32897/1290715888985_1be656d57c392eeb3fd443d6fa1aa80c1ecbac1467c4b358b3594364f15c6303.pdf

Running Horse Consulting. 2011. Significant Trails Within Little Shuswap Indian Band's Area of Interest (Second Draft). Vernon, BC.

Secwepemc Cultural Education Society. 1993. English Shuswap Dictionary.

Secwepemcuĺecw, Land of the Shuswap. 2016. Secwepemctsin – Language of the Secwepemc. http://www.landoftheshuswap.com/lang.html, accessed August 8, 2016.

Serrouya, R., B.N. McLellan, and J.P. Flaa. 2007. Scale-dependent microhabitat selection by threatened mountain caribou (Rangier tarandus caribou) in cedar-hemlock forests during winter. Canadian Journal of Forest Research 37:1082-1092.

Shook, Charlie. 1997. Personal History of Wells Gray Park, interview by Simpcw FN for Clearwater Forest District TUS. Unpublished transcript and notes on file at the Simpcw FN Archives (2016.04.136).

Shuswap Band and Urban Systems Ltd. 2016. Comprehensive Community Plan, May 2016.

Shuswap Indian Band. 2008. Re Tsqwiṭstens-kucw ne Csalḳken': our people between the two mountain ranges (Shuswap Indian Band Traditional Land Use Study). Calgary: Shuswap Indian Band/Fish Creek Press.

Simpcw FN. 1988. Anthropology Subject Index Headings (re. 1980s Interview Transcripts). Unpublished document on file at the Simcpw FN Archives, Chu Chua, BC.

_____. Robson Valley Forest District TUS. Unpublished report on file at Simpcw FN Archives, Chu Chua, BC.

_____. 2009. Draft SOC Preliminary Report in Respect of the Mica Unit 5&6 Project Area. Unpublished report on file at the Simpcw First Nation Archives (digital copy in Blue Backup).

_____. 2011a. Simpcw First Nation Comprehensive Community Plan. An unpublished report on file at the Simpcw FN Archives.

_____. 2011b. Research Report in Support of Simpcw Strength of Claim: Ruddock Creek Final Report. Unpublished report on file at Simpcw FN Archives, Chu Chua, BC.

_____. 2013. Research Report in Support of Simpcw First Nation Strength of Claim in the Robson Valley Area of British Columbia. Unpublished report on file at Simpcw FN Archives, Chu Chua, BC.

_____. (2014). Simpcw Traditional Land Use and Ecological Knowledge Project in Response to the Proposed Kinder Morgan/TM Pipeline. Unpublished report on file at Simpcw FN Archives, Chu Chua, BC.

_____. 2015a. Community Planning Session Report. Prepared with support of the Centre for Indigenous Environmental Resources (CIER). An unpublished report on file at the Simpcw FN Archives.

_____. 2015b. Valemount Glacier Destination Resort Land and Resource Use Study. Prepared by Estsek Environmental Service (Judy Banks and Paul Harrison). An unpublished report on file at the Simpcw Archives (digital copy).

Simpcw FN GIS. 2016. Comprehensive Database. GIS Department, Chu Chua, BC.

Smith-Burns, Claire E. 1977. Historical Survey of Revelstoke Dam Pondage and Adjacent Area: Summary Report, October 1977. Jean Bussey, editor (1978). In Bussey 1978, Revelstoke Archaeology Project: Final Report (1977-18). Unpublished report on file at the BC Archaeology Branch, Victoria.

Spirit Map. 2016. Journey through Secwepemculew – Government Policy and Land Use. A project of Canadian Culture Online, Funded by the Government of Canada. http://spiritmap.ca/neskonlithgl1.html accessed September 26, 2016.

Splatsin. 2008. Splatsin Traditional Use Study. Enderby, BC: Unpublished Report.

Splatsin. 2009. Splatsin Traditional Uses and Ecological Knowledge of the Mica Dam Area. Unpublished report prepared for BC Hydro.

Splatsin. 2013. Petinesa n Xatáqs Thinking for the Future: Splatsin Comprehensive Community Plan, June 2013.

Splatsin, Thomas (Tad) McIlwraith, and DM Cultural Services, Ltd (DMCS). 2012. Traditional Use and Knowledge Study of the Skaknpálhxw (Mt. Griffin) Area in Response to Federated Co-Operative Limited's Logging Plans (Licence A18670). Report on Findings.

Surveyor General of British Columbia. 1915. British Columbia Sectional Map, Sicamous Sheet, West of Sixth Meridian. http://www.shuswapwatershed.ca/wp-content/uploads/2011/09/map-largest.jpg, accessed September 19, 2016.

T'selcéwtqen Clleqmél'ten, Chief Atahm School. 2016. T'selcéwtqen Clleqmél'ten. http://www.chiefatahm.com/, accessed July 19, 2016.

Te Kōhanga Reo. 2016. Home. http://tekohangareo.com.au/, accessed August 3, 2016.

Teit, James. 1930. The Salishan Tribes of the Western Plateaus. Seattle: The Shorey Bookstore (Facsimile of the 1927-28 Bureau of American Ethnology Annual Report).

Teit, James et al. 1917. Folk-Tales of Salishan and Sahaptin Tribes. Edited by Franz Boas. New York: American Folk-Lore Society.

Teit, James A. 1909. The Shuswap. In Memoirs of the American Museum of Natural History. Franz Boas, ed. New York: American Museum of Natural History.

Teit, James A. 1908-1920. Salish Ethnographic Materials. Boas Collection 372, Roll 16.S.7. Philadelphia: American Philosophical Society Library. Also held in the BC Archives, Add Mss. 1425, Microfilm A-247.28

Teit, James A. 1906. The Lillooet Indians. Franz Boas, ed. Pp. 193-300. American Museum of Natural History Memoir 4(5).

Teit, James A. 1900. The Thompson Indians of British Columbia, Vol. II, Part V of the Jessup Expedition. Franz Boas, ed. Pp. 163-392. American Museum of Natural History Memoir 2(4).

Turner, Nancy J. 1977. Economic Importance of Black Tree Lichen (Bryoria Fremontii) to the Indians of Western North America. Economic Botany 31(4): 461–470.

Turner, Nancy J. 1979. Plants in British Columbia Indian Technology. British Columbia Provincial Museum Handbook, 36. Victoria, BC: British Columbia Provincial Museum.

Turner, Nancy J. 1988a. Ethnobotany of Coniferous Trees in Thompson and Lillooet Interior Salish of British Columbia. Economic Botany 42(2): 177–194.

Turner, Nancy J. 1988b. "The Importance of a Rose": Evaluating the Cultural Significance of Plants in Thompson and Lillooet Interior Salish. American Anthropologist 90(2): 272–290.

Turner, Nancy J. 1997. Food Plants of Interior First Peoples. Vancouver: UBC Press.

Turner, Nancy J. 2014. Ancient Pathways, Ancestral Knowledge: Ethnobotany and Ecological Wisdom of Indigenous Peoples of Northwestern North America. McGill-Queen's Native and Northern Series, 74. Montreal, QC: McGill-Queen's University Press.

[28] Not reviewed.

Turner, Nancy J., Marianne Boelscher Ignace, and Brian D. Compton. 1992. Secwepemc (Shuswap) Tree Names: Keys to the Past? Kamloops, BC: ICSNL, 27. http://lingserver.arts.ubc.ca/linguistics/sites/default/files/1992_Turner_Ignace_Compton.pdf, accessed September 19, 2016.

Turner, Nancy J., Marianne Boelscher Ignace, and Ronald Ignace. 2000a. Traditional Ecological Knowledge and Wisdom of Aboriginal Peoples in British Columbia. Ecological Applications 10(5): 1275–1287.

Turner, Nancy J., Marianne Boelscher Ignace, and Ronald Ignace. 2000b. Traditional Ecological Knowledge and Wisdom of Aboriginal Peoples in British Columbia. Ecological Applications 10(5): 1275–1287.

Turner, Nancy J., Harriet V. Kuhnlein, and Keith N. Egger. 1987. The Cottonwood Mushroom (Tricholoma Populinum): A Food Resource of the Interior Salish Indian Peoples of British Columbia. Canadian Journal of Botany 65(5): 921–927.

UBCIC. 2016. Index, Volume 3, Minutes of Decision, Correspondence & Sketches. Joint Indian Reserve Commission (JIRC) & GM Sproat: "BC Indian Reserves, File Nos. 7571, 8132, 8402, 8496, 9804 and 20242 No. 1, Vol. No. 1" [Reg. No. B-64656]. Retrieved 11 Oct 2016: http://jirc.ubcic.bc.ca/sites/jirc.ubcic.bc.ca/files/Volume%203.pdf

United Nations Educational, Scientific and Cultural Organisation (UNESCO). 2001. UNESCO Universal Declaration on Cultural Diversity. http://www.refworld.org/docid/435cbcd64.html. accessed August 12, 2016.

Urban Systems Ltd. 2015. Little Shuswap Lake Indian Band Comprehensive Community Plan.

Utzig, G. and D. Schmidt. 2011. Dam Footprint Impact Summary: BC Hydro Dams in the Columbia Basin. Retrieved 13 April 2016: http://www.sgrc.selkirk.ca/bioatlas/pdf/FWCP-CB_Impacts_Summary.pdf.

Walker, Deward E. 1998. Introduction. In Deward Walker, ed., Handbook of North American Indians, Vol. 12: Plateau. Washington DC: Smithsonian Institution Press, 1-7.

Williams, Cindy. n.d. History of the Splatsin People. Enderby, BC: Unpublished Manuscript in Possession of the Williams' Family.

Zacharias, Sandra K. 1992. Canim Lake Archaeology Project 1992 (1992-0039). Unpublished report on file at the BC Archaeology Branch, Victoria.

APPENDICES:

APPENDIX A, ADAMS LAKE LITERATURE AVAILABLE ON THE BAND'S CKK DATABASE, AS OF SEPTEMBER 19, 2016.

Adams Lake and Neskonlith Secwepemc. 1999. "Land Traditions of the Neskonlith and Adams Lake Shuswap." Preliminary Draft Report. Submitted to Aboriginal Affairs Branch, Ministry of Forests, British Columbia.

Adams Lake: C'STELEN Natural Resources Department. n.d. "Aboriginal Trails in the Kamloops TSA."

Adams Lake Indian Band, Neskonlith Indian Band, Splatsin Indian Band, and DM Cultural Services, Ltd. 2013a. "Traditional Use Assessment for the Malakwa-Taft Stretch of Highway 1, in Relation to the Four-Laning and Bridge Replacements in that Corridor Final Report (Draft)." Adams Lake, BC.

———. 2013b. "Traditional Use Study for the Aline Hill Microwave Capacitor Replacement Final Report." Adams Lake, BC.

Anderson, Alex. 1866a. "Sketch of the Upper Columbia Colvile to Jasper's House, 1842 and Other Years." Surveyor General Plan 25T3 Roads and Trails. Surveyor General of B.C., Victoria, B.C.

———. 1866b. "Sketch of the Upper Columbia Colvile to Jasper's House, 1842 and Other Years [Different Copy]." Surveyor General Plan 25T3 Roads and Trails. Surveyor General of B.C., Victoria, B.C.

Anderson, H.P. 1915. "[Map of Okanagan Lake Area]." PABC CM B 13660.

Arcas Associates, Heritage Resource Consultants. 1986. "Highway 1 - Four Laning Project Cambie to Revelstoke, B.C.: Detailed Heritage Resource Inventory and Impact Assessment." Kamloops, BC. Unpublished report prepared for the Heritage Conservation Branch, Ministry of Provincial Secretary and Government Services (Permit 1985-14), and Designs and Surveys Branch, Ministry of Transportation and Highways.

Arcas Consulting Archaeologists, Ltd. 1997. "Okanagan Timber Supply Area Archaeological Overview Assessment." Culture Library, Ministry of Small Business, Tourism and Culture, Victoria, B.C.

Arrowsmith, John. 1859. "The Provinces of British Columbia & Vancouver Island with Portions of the United States & Hudson's Bay Territories Compiled from Original Documents." PABC (BCARS) CM B 127. From British Parliamentary Papers relating to Brit Col.

Beirne, Patricia D., and David L. Pokotylo. 1979. “Hat Creek Project - Inventory Assessment and Evaluation of the Cultural Heritage Resources.” Vancouver, BC: Department of Anthropology and Sociology, University of British Columbia. Environmental Impact Statement Reference Number: 60.

Black, Samuel. 1833. “Map of the Okanagan River.” Map no. CM/B2079. BC Archives, Victoria, B.C.

———. 1835. “British Columbia, Thompson River District.” Map no. CM/B2079. BC Archives, Victoria, B.C.

Bouchard, Randy, and Dorothy Kennedy. 1985. “Lakes Indian Ethnography and History.” Report prepared for the British Columbia Heritage Conservation Branch, Victoria, B.C. Culture Department Library: Ministry of Small Business, Tourism and Culture.

Bouchard, Randy, Dorothy Kennedy, and British Columbia Indian Language Project. 1995. “An Ethnographic Examination of Scheidam Flats Land Use.” Prepared for The Ministry of Attorney General British Columbia, and The Department of Justice Canada.

———. 2005. “First Nations’ Ethnography and Ethnohistory British Columbia’s Lower Kootenay/Columbia Hydropower Region.” Report Prepared for Columbia Power Corporation, Castlegar, B.C.

Cairnes, C.E. 1929. “Map 232A: Portion of Slocan and Upper Arrow Lakes Area, Kootenay District, British Columbia.” Ottawa, Ontario: Department of Mines, Canada. Arrow Lakes Historical Society.

Cameron, Ian, and Ursus Heritage Consulting Ltd. 2014. “BC Hydro Reservoir Archaeology Program Arrow Lakes Reservoir Archaeological Inventory & Impact Assessment.” 2014 Interim Report Heritage Inspection Permit #2013-0080.

Campbell-Brown, H. 1970. “Vernon Burial Site EcQt (Sept./1970).” Permit No. 1969-24. Resource Information Centre, Heritage Conservation Branch.

Carid, Paula. 2000. “Adams Lake Indian Band: Roads on Squaam, I.R. No. 2.” Vancouver BC: Union of B.C. Indian Chiefs.

C.E. Perry & Co. P.L.S., Civil & Mining Engineers. 1893. “Map of the Southern Dist West Kootenay.” Rand, McNally & Co. Arrow Lakes Historical Society.

Corner, J. 1969. “Pictographs (Indian Rock Paintings) In The Interior of British Columbia.” 1969-12. Resource Information Centre, Heritage Conservation Branch.

Cox, W.R. 1826. “Indian Map: Arrow Lakes to Shuswap River.” Box 42. Arrow Lakes Historical Society.

C.S. Hammond & Co. 1921. “Map of British Columbia.” New York, NY: C.S. Hammond & Co.

Dawson, George M. 1898. “Geographical Survey of Canada.”

———. n.d. “Map Shewing the Limits of the Shuswap People of British Columbia, with the Principle Subdivisions.”

Diabo, Russell. 1998. “Traditional Use Study Adams Lake and Neskonlith Indian Bands.” 1997/98 Final Report of Phase One. Ministry of Forests, Aboriginal Affairs Branch, Victoria, B.C.

DMR Research Services. 1998. “Adams Lake and Neskonlith Indian Bands’ Traditional Use Study Government Land and Resource Policy Historical Report (Draft).” Burnaby, BC.

Douglas, James. 1868. “Sketch Showing Indian Claims on the North and Shuswap Rivers to Accompany My Report on the Adams Lake Dec 22nd 1868.”

Drewry & McArthur. 1892. “Sketch Map of Part of the Rocky & Selkirk Mountains British Columbia to Accompany Reports of Dominion Land Surveyors.” Canada. Canada Sessional; Papers (No. 13) 55 Victoria A. 1892 p. 32-4. In R.C. Harris fonds. UBC Library, Rare Books and Special Collections, Vancouver.

Elias, Peter Douglas. 2009. “Secwepemc Use of Lands and Resources in the Mica 5-6 Project Area.” Unpublished Report Prepared for the Adams Lake Indian Band. Black Diamond Research.

Evans, Clint. 2009. “Historical Overview of Aboriginal Territories and Land Use in Southeastern British Columbia, 1800-1905.” Report Prepared for Natural Resources Canada, Ottawa, Ontario.

Favrholdt, K.C. n.d. “[Map from Canoe River ‘Boat Encampn’t’ to ‘Jasper’s House’].”

Favrholdt, Kenneth. 1997a. “A Cordilleran Communication: The Brigade System of the Far Western Fur Trade.” Vancouver, BC: University of British Columbia.

———. 1997b. “Trails in the Okanagan TSA.” Culture Library, Ministry of Small Business, Tourism and Culture.

———. 2000. “Aboriginal Trails in the Kamloops TSA, A Report and Inventory for Adams Lake Indian Band.” Kamloops, BC.

———. 2009a. “Mica 5/6 Trails Map.”

———. 2009b. “Report on Trails of Aboriginal Interest to Sexqéltkemc (Lakes Division) Within the BC Hydro MICA 5-6 Project Area, Final Draft.”

———. 2013. “Strength of Claim Report or the Adams Lake Indian Band (Cstelnec).”

———. 2014. “Report on Aboriginal Trails Along the Trans-Canada Highway Corridor Between Chase and the Continental Divide.” Victoria, B.C.

Fladmark, K. R. 1969. “Archaeological Sites in the Shuswap - South Thompson River Area B.C.” Department of Archaeology, University of Calgary. Resource Information Centre, Heritage Conservation Branch.

Grabert, Garland F. 1963. “Archaeological Survey of the Upper Okanagan Valley British Columbia 1967.” Department of Sociology-Anthropology Western Washington State College.

Green, Ashdown. n.d. “Great Shuswap and the Columbia River by Mr. Green.”

———. n.d. “Trail between Great Shuswap Lake and the Columbia River.”

Hills, L.V. 1965. “Preliminary Report on the Excavation at Agate Bay on Adams Lake, B.C. (1965-0002).” Permit 1965-2. Archaeology Branch, Victoria, BC.

Hornaday, W.T. 1887. “Map Illustrating the Extermination of the American Bison.” Seattle, Washington: Neelans Litho. Shorey Facsimile Map SJM-36 9/71.

Ignace, Marianne, and Ron Ignace. 2011. “Traditional Knowledge, Land Use and Occupancy Study – Highway 1 Upgrade Phase 1 - Monte Creek to Chase Area Preliminary Report Prepared for Neskonlith Indian Band.” Savona, B.C.

Ignace, Ronald Eric (Stsmél’ecqen). 2008. “Our Oral Histories Are Our Iron Posts: Secwepemc Stories and Historical Consciousness.” Vancouver, BC: Simon Fraser University.

Jemmett, W.S. 1891. “Survey of Little Lake Indian Reserve No.1.” 4243/91. Lands & Works Department, Victoria, B.C.

Keen, John. 1892. “Keen’s Map of Kootenay, B.C.” Selkirk College Library, Mansbridge Kootenay Collection.

Lang, F.C. 1897. “Prospectors’ Map: A Portion of District of East Kootenay, British Columbia.” Ottawa, Ontario: Department of Agriculture, Canada. Golden Museum.

Leech, P.J. 1865. “Rough Sketch of Route of Mr. Orrs Prospecting Party from Kamloops to the Great Bend of the Columbia River.” Legal Surveys, Old & Odd Plans 19. BC Archives, Victoria, B.C.

Lee, R.H. 1895. “Map of the Columbia and Canoe Rivers from Revelstoke to Tete Jaune Cache from Exploration Surveys Made by R.H. Lee P.L.S.” Victoria, BC. UBC Library, Rare Books and Special Collections, Vancouver.

Marshall, Daniel Patrick. 2000. “Claiming the Land: Indians, Goldseekers, and the Rush to British Columbia.” Vancouver, BC: University of British Columbia.

McDonald, Archibald. 1827. “A Sketch of Thompson’s River District.” Hudson’s Bay Company. CM 1354. BC Archives, Victoria, B.C.

Millennia Research Limited. 2011. “BC Hydro Arrow Lakes Reservoir Plan Heritage Monitoring Wind and Wave Erosion Study Year 2 Report.” Submitted to: British Columbia Hydro and Power Authority. Victoria, B.C.

———. 2012. “BC Hydro Arrow Lakes Reservoir Heritage Monitoring Wind & Wave Erosion Study Year 3 Report.” Submitted to: British Columbia Hydro and Power Authority. Victoria, B.C.

———. 2014. “BC Hydro Sugar Lake Reservoir Year 1 Report.” Submitted to: British Columbia Hydro and Power Authority. Victoria, B.C.

Mitchell, Donald H. 1968. “Archaeological Investigations, Summer, 1967 (With a Report on the Arrow Lakes Project by C.J. Turnbull (1967-0004).” 930.1 B862 1967-4 MIT.

Mohs, Gordon. 1982. “Archaeological Investigations at the Vallican Site (DjQj 1), Slocan Valley, Southeastern B.C.” 930.1/B862/M.O./1981-16/MOH. Ministry of Municipal Affairs, Recreation & Culture Library.

Morrissey, Greg. 2009. “Tools and Change: The Shift from Atlatl to Bow on the British Columbia Plateau.” Vancouver, BC: Simon Fraser University.

Oakes, Nicole, Doug Brown, and Brown & Oakes Archaeology. 2014. “Whatshan Lake Reservoir Archaeology Program Year 2 2014 Interim Report.” Heritage Inspection Permit 2013-076.

Palmer, Howard, and Robert H. Chapman. 1915. “Reconnaissance Map of the Northern Selkirk Mountains and the Big Bend of the Columbia River, British Columbia.” Ottawa, Ontario: Canada, Surveyor General’s Office. A-Q-3-4. Revelstoke Museum.

Perermann, A. 1859. “Karte des Fraser River [Map of the Fraser River].”

Perry, Alfred C. 1866. “Plan by Alfred C. Perry.” Colonial Correspondence, File 1349. BC Archives, Victoria, B.C.

Prentiss, William C., and Ian Kuijt, eds. 2004. Complex Hunter-Gatherers Evolution and Organization of Prehistoric Communities on the Plateau of Northwestern North America. Salt Lake City: The University of Utah Press.

Rand, McNally & Co. 1895. “Map of British Columbia: Electoral Districts.” Rand, McNally & Co.

Ray, Vernie. 1936. Native Villages and Groupings of the Columbia Basin.

Ross, Alexander. 1821. “Columbia District Map, Drawn by Alexander Ross, September 1821. With Notes Added by Ross, August 1st, 1849.” London. Department of Manuscripts. Add. Mss. No. 31, 358B. British Library.

Running Horse Consulting. 2011. “Significant Trails Within Little Shuswap Indian Band’s Area of Interest (Second Draft).” Vernon, BC.

Sam, Marlowe Gregory. 2013. “Oral Narratives, Customary Laws, and Indigenous Water Rights in Canada.” Kelowna, BC: University of British Columbia.

Sandy, Nancy Harriet. 2011. “Reviving Secwepemc Child Welfare Jurisdiction.” Victoria, BC: University of Victoria.

Sanger, David. 1961. “A Burial Site Survey of the Shuswap, Thompson, and Lillooet Area in South Central British Columbia (1961-6).” Vancouver, BC.

Smithe, Wm. 1898. “Map of the Kootenay District in British Columbia.” Touchstones Nelson Museum, Museum of Art and History, Shawn Lamb Archives.

Smith, Harlan. 1900. “Archaeology of the Thompson River Region.” In Memoirs of the American Museum of Natural History Volume II; Publications of the Jesup North Pacific Expedition Volume II. 1898-1900, edited by Franz Boas. New York (Reprinted: AMS Press, New York, 1975).

Steele, S.B. 1888. “Map to Accompany Report of Supt. S.B. Steele Commanding the Detachment of Mounted Police in British Columbia.” Fort Steele Historical Town.

Teit, James. 1909a. “Map Showing the Shuswap Territory.” In “The Shuswap.” Memoirs of the American Museum of Natural History 4(7); Publication of the Jesup North Pacific Expedition 2(7). New York: G.E. Stechert (Reprinted: AMS Press, New York, 1975).

———. 1909b. “The Shuswap.” In Memoirs of the American Museum of Natural History 4(7); Publication of the Jesup North Pacific Expedition 2(7), edited by Franz Boas. New York: G.E. Stechert (Reprinted: AMS Press, New York, 1975).

Terra Archaeology. 2012. “Yellowhead Mining Proposed Harper Creek Mine Archaeological Impact Assessment.” British Columbia Heritage Conservation Act Archaeological Inspection Permit 2011-0209.

———. 2013. “Archaeological Impact Assessment Interim Report Hoffman’s Bluff, British Columbia (2012-0134).” BC Heritage Conservation Act Inspection Permit #2012-0134.

———. 2015. “Permit 2014-0042 Trans-Canada Highway 1 Four-Laning Project Final Phase of Archaeological Mitigation at EdQx-45, Component B.” BC Heritage Conservation Act Inspection Permit #2014-0042.

Tipi Mountain Eco-Cultural Services, Ltd. 2014. “Archaeological Inventory and Impact Assessment of the Duncan Reservoir Shoreline.” Annual Report, Draft Report. Cranbrook, BC. BC Heritage Conservation Act Inspection Permit #2012-0136.

———. 2014. “BC Hydro Reservoir Archaeology Program Kinbasket Reservoir Archaeological & Impact Assessment.” Cranbrook, BC. BC Heritage Conservation Act Inspection Permit #2014-0107.

Turnbull, Christopher John. 1968. “The Preliminary Report of a Disturbed Burial Site Near Fort Steele British Columbia.” 1969-17. University of Calgary. Resource Information Centre, Heritage Conservation Branch.

———. 1972. “Archaeological Sites in the Arrow Lakes Area.” Nakusp Museum.

Unknown. 1832. “Map of a Portion of British Columbia Compiled from the Surveys and Explorations of the Royal Navy & Royal Engineers at the Camp New Westminster.”

———. 1889. “Map of Portion of Yale District, Shewing Routes Explored for Trail from Cherry Creek to Columbia River.” Surveyor General 2S T3 Roads and Trails. In R.C. Harris fonds. UBC Library, Rare Books and Special Collections, Vancouver.

———. 1910. “Spillimacheen Sheet, West of Fifth Meridian [map].” Surveyor General of Canada. UBC Library, Rare Books and Special Collections, Vancouver, BC.

———. 1913a. “Donald Sheet.” Surveyor General of Canada. UBC Library, Rare Books and Special Collections, Vancouver.

———. 1913b. “Donald Sheet, W of Fifth Meridian.” Surveyor General of Canada. UBC Library, Rare Books and Special Collections, Vancouver, BC.

———. n.d. “National Topographic System (1:50,000 Map Coverage) within Shuswap Traditional Territory (approximate).”

Vernon, F.G. 1888. “British Columbia, Compiled by Direction of the Honorable F.G. Vernon, Chief Commissioner of Lands and Works.” Surveyor General 3T 11 Old. UBC Library, Rare Books and Special Collections, Vancouver.

Wilkes, Charles. 1841. “Map of the Oregon Territory by the U.S. Ex. Ex. Charles Wilkes Esq. Commander.” Philadelphia: Lea & Blanchard. http://www.davidrumsey.com/maps890027-24331.html.

Wilson, Ian R. 1991a. “Archaeological Overview Highway 1 Corridor Study Kamloops to Canoe.” Victoria, B.C.: I.R. Wilson Consultants Ltd. Ministry Library, Ministry of Municipal Affairs, Recreation & Culture.

———. 1991b. “Excavations at EdQx 41 & 42, Site Evaluation at EdQx43 Monte Creek.” Permit 1990-140 Vol. 1. Ministry Library, Ministry of Municipal Affairs, Recreation & Culture.

Yow, Lee Roy. 2014a. “Report: The Trans-Canada Highway over the Adams Lake Indian Band’s Switsemalph Indian Reserve No. 6.” Vancouver, B.C.: Union of B.C. Indian Chiefs.

———. 2014b. “0684-408: The Trans-Canada Highway over the Adams Lake Indian Band’s Switsemalph Indian Reserve No. 7.” Vancouver, B.C.: Union of B.C. Indian Chiefs.

APPENDIX B, LITTLE SHUSWAP LAKE LITERATURE AVAILABLE ON THE BAND'S CKK DATABASE, AS OF SEPTEMBER 19, 2016.

Ernst, Andrea, and Andrés Artz. 2000. "Little Shuswap Indian Band Traditional Use Study." Final Draft. Prepared for Aboriginal Affairs Branch, Ministry of Forests.

APPENDIX C, NESKONLITH LITERATURE AVAILABLE ON THE BAND'S CKK DATABASE, AS OF SEPTEMBER 19, 2016.

Favrholdt, Kenneth. 2014. "Report on Aboriginal Trails Along the Trans-Canada Highway Corridor Between Chase and the Continental Divide." Victoria, B.C.

APPENDIX D, SHUSWAP LITERATURE AVAILABLE ON THE BAND'S CKK DATABASE, AS OF SEPTEMBER 19, 2016.

Ashwell, Reg. 1977. "Interior Salish." In Indian Tribes of British Columbia, 48–59. Saanichton, BC: Hancock House Publishers Ltd.

Atkins, B. R. 1920. "How the Shuswap Came to the Kootenays One Hundred Years Ago."

Atkins, B.R., E.L. Affleck, and G.B. Forde. 1977. Columbia Chronicles: A History of the Kootenay District in the 19th Century. The Kootenays in Retrospective. FC 3845 K6 K69 V.1 1977 C.1.

Barrett, Stephen W. 1980. "Ethnohistory of Indian Fire Practices in Western Montana." 1st Annual Report: Relationship of Indian-Caused Fires to the Ecology of Western Montana Forests. School of Forestry, University of Montana.

Boas, Franz. 1909. The Jesup North Pacific Expedition. Vol. 2, Parts I-VII. New York, NY: AMS Press, Inc.

British Association for the Advancement of Science. 1890. "Sixth Report on the North-Western Tribes of Canada with a Map." London, England: Offices of the British Association for the Advancement of Science. https://ia902304.us.archive.org/2/items/cihm_14338/cihm_14338.pdf.

Canadian Columbia River Inter-Tribal Fisheries Commission. 2004. "Kinbasket - Upper Columbia Sturgeon Recolonization Risk Assessment Pathogen and Local Knowledge Sections (Draft)." Prepared for The Upper Columbia White Sturgeon Recovery Initiative.

Choquette, Wayne T. 1992. "An Archaeological Overview of a Proposed Golf Course/Resort Development on a Portion of Columbia Lake Reserve No. 3." Kootenay Cultural Heritage Centre. Prepared for the Columbia Lake Band.

Crowe-Swords, David. 1971. "An Analysis of Archaeological Resources in the Revelstoke-Glacier National Park Area." Department of Archaeology, Simon Fraser University. Resource Information Centre, Heritage Conservation Branch, Victoria, B.C.

Dawson, George. 1891. "Notes on the Shuswap People of British Columbia." In Proceedings and Transactions of the Royal Society of Canada for the Year 1891, 9, ser. 1 (Sect. 2: Papers for 1891):3–44.

DM Cultural Services, Ltd. (DMCS), and Thomas (Tad) McIlwraith. 2014. "Cultural Heritage Assessment for Sexqéltkemc Te Secwepemc and the Shuswap Band Uses of the Illecillewaet Valley, British Columbia." Unpublished report prepared for Sexqéltkemc Te Secwepemc and the Shuswap Band.

Ernst, Andrea, and Running Horse Consulting. 2001. “Columbia WUP Literature Review - Ethnohistorical.” Vernon, B.C.: Running Horse Consulting.

Fish Creek Consulting. 2007. “Interim Report on the Shuswap Indian Band Traditional Use Research.” Calgary, Alberta: Fish Creek Consulting.

———. 2009. “Report on the Kenpesq’t (Shuswap Indian) Band Traditional Use and Environmental Interests in the Proposed Glacier Howser Hydroelectric Project.” Calgary, Alberta: Fish Creek Consulting.

FMA Heritage Resources Consultants Inc. 2008. “Archaeological Mitigation Completion Report EdQa 64 Eagle Ranch Clubhouse.” Calgary, Alberta: FMA Heritage Resources Consultants.

Golder Associates Ltd. 2005. “Archaeological Impact Assessment of Ministry of Transportation Albert Canyon Quarry (Tangier River Prospect) Near Revelstoke, BC Heritage Conservation Act Permit 2006-380.” Submitted to Ministry of Transportation, Southern Interior Region. Kamloops, B.C.: Golder Associates Ltd.

———. 2006. “Archaeological Impact Assessment of Proposed Residential Subdivision on District Lot 100, Halcyon Hot Springs, BC Permit 2006-020.” Submitted to Selkirk Realty. Kamloops, B.C.: Golder Associates Ltd.

Graham, Clara. 1963. “Chapter XXI: The Lakes Indians and the Shuswaps.” In This Was the Kootenay. Evergreen Press.

Ignace, Marianne Boelscher. 1992. “Preliminary Report: Aboriginal Territories of the Shuswap Nation - Report on Ethnographic & Ethnohistorical Sources.” Preliminary Report. Simon Fraser University Archives and Records Management Department. http://atom.archives.sfu.ca/index.php/f-251-3-6-0-24.

Langemann, E. Gwyn. 1998. “A Description and Evaluation of Eight Housepit Sites in Banff National Park, Alberta.” In The 31st Annual Meeting of the Canadian Archaeological Association. Victoria, Canada.

Mandell Pinder Barristers & Solicitors. 1995. “Shuswap Indian Band Specific Claims.” Vancouver, B.C.

McDonald & Company Barristers & Solicitors. 2008. “Various Secwepemc First Nation Mica 5 & 6 Material for October 28, 2008 Meeting.”

Ministry of Attorney General, Legal Services Branch, Aboriginal Research Division. 2009. “Shuswap Indian Band: Review of Anthropological and Historical Sources Relating to the Use and Occupation of Land.”

Moberly, Robert, and British Columbia. Department of Lands and Works. 1869. “Reports of Explorations, 1864-1865 To Government of British Columbia: Columbia River Exploration.” Victoria, B.C.: Government Printing Office.

Perry, William. 1987. “Archaeological Resource Impact Assessment, Kootenay National Park, 1986.” Resource Information Centre, Heritage Conservation Branch, Victoria, B.C. http://www.friendsofkootenay.ca/archaeological-resource-impact-assessments-kootenay-national-park.

Royal Commission on Aboriginal Peoples. 1996. “Chapter 4: Lands and Resources.” In Restructuring the Relationship, Part 2. Vol. 2. Report of the Royal Commission on Aboriginal Peoples. http://www.collectionscanada.gc.ca/webarchives/20071115053257/http://www.ainc-inac.gc.ca/ch/rcap/sg/sgmm_e.html.

Shuswap Indian Band. 2004. “Declaration of Territorial Interest from The Descendants of Kinbasket People.”

———. 2008. “Re Tsqwátstens-Kucw Ne Csalíken’: Our People Between the Two Mountain Ranges.” Traditional Land Use Study. Calgary, Alberta: Shuswap Indian Band/Fish Creek Press.

Smyly, John. n.d. “The Shuswap Kekuli.” Royal BC Museum.

The BC Working Group on CED, and The Province of British Columbia. 1995. “Sharing Stories: Community Economic Development in British Columbia.” Vancouver, B.C.: BC Working Group on CED.

Union of B.C. Indian Chiefs. 1980. “Submission to the Russell Tribunal - Presented by the Union of B.C. Indian Chiefs, November 1980.” KE 7721.9.S23 1980 c2. Union of B.C. Indian Chiefs Resource Centre. http://constitution.ubcic.bc.ca/sites/constitution.ubcic.bc.ca/files/OCRrussell1optimized.pdf.

Unknown. n.d. “Earliest Inhabitants.”

———. n.d. “How Kinbasket Lake Got Its Name.”

Various. 1892. “Department of Indian Affairs Correspondence Regarding the Stoney Indians, Chief Kinbasket, and a Thoroughfare through the Arrow Lakes Reserve.” Library and Archives Canada.

Wood, Barry P., and Ian Tamasi. 2009. “Archaeological Impact Assessment: Marten Wheeler 2008 Exploration Drilling Program, Final Report.” BC Heritage Inspection Permit 2008-0285. Prepared for Elk Valley Coal Corporation, Coal Mountain Operations.

APPENDIX E, SPLATSIN LITERATURE PROVIDED BY THE BAND, AS OF SEPTEMBER 19, 2016.

Adams Lake Indian Band, Neskonlith Indian Band, Splatsin, and DM Cultural Services, Ltd. 2013. "Traditional Use Assessment for the Malakwa-Taft Stretch of Highway 1, in Relation to the Four-Laning and Bridge Replacements in That Corridor, Preliminary Final Report." Adams Lake, BC.

BC Hydro. 2010. "Exhibit B-4: BC Hydro's Responses to the British Columbia Utilities Commission and Intervener Round 1 Information Requests for the Spillway Gates Project."

Bouchard, Randy, Dorothy Kennedy, and British Columbia Indian Language Project. 2005. "First Nations' Ethnography and Ethnohistory British Columbia's Lower Kootenay/Columbia Hydropower Region." Report Prepared for Columbia Power Corporation, Castlegar, B.C.

Clough, Shawn, Aaron Gillespie, and Secwepemc Fisheries Commission. 2003. "Spallumcheen (Splatsin) Traditional Use Study - Coursier Dam Decommissioning Project." Secwepemc Fisheries Commission.

DM Cultural Services, Ltd. (DMCS), and Thomas (Tad) McIlwraith. 2014. "Cultural Heritage Assessment for Sexqéltkemc Te Secwepemc and the Shuswap Band Uses of the Illecillewaet Valley, British Columbia." Unpublished report prepared for Sexqéltkemc Te Secwepemc and the Shuswap Band.

DM Cultural Services, Ltd. (DMCS), and Splatsin. 2011. "Traditional Use Study for the Trans-Canada Highway Clanwilliam Area in Response Highway Realignment at Clanwilliam Overhead." Unpublished final report. Mill Bay, BC.

McIlwraith, Thomas (Tad). 2013. "Splatsin Historical and Cultural Connections with the Columbia River and Arrow Lakes of British Columbia: Research, Findings, and Analysis." Draft, For Discussion. Prepared for Raymond Cormier: Director, Title and Rights, Splatsin.

———. 2014. "Secwepemc Cultural Connections to the Columbia River and Arrow Lakes." Presented October 6, 2014 at the University of Guelph.

Splatsin, Thomas (Tad) McIlwraith, and DM Cultural Services, Ltd (DMCS). 2012. "Traditional Use and Knowledge Study of the Skaknpálhxw (Mt. Griffin) Area in Response to Federated Co-Operative Limited's Logging Plans (Licence A18670)." Report on Findings.

Splatsin, Thomas (Tad) McIlwraith, and DM Cultural Services, Ltd. (DMCS). 2012. "Traditional Use and Knowledge Study of Timber Forest Licence 23 in Response to Interfor's Logging Plans in the Fosthall Creek." Report on Findings.

Turnbull, James. 1865. “Plan of the Columbia River District Shewing the Routes Explored by Messrs. Moberly, Green & Turnbull, 1865-1866.” Facsimile No. 93, 1982; Miscellaneous 8T2. Land Title and Survey Authority of British Columbia, Victoria, B.C.

APPENDIX F, MAPS REVIEWED FOR THIS REPORT

Anderson, A.C. 1867. "A Portion of the Colony of British Columbia from Various Sources, Including Original Notes from Personal Explorations... 183[?] and 1851." BCA, CM F9, Map 3 Locker I.

Cox, William G. 1862. Map of Proposed Road between Head of Okanagan Lake and the Columbia River. Roads & Trails 26T3. Land Title and Survey Authority of British Columbia, Victoria, B.C.

Dawson, G.M., and J. McEvoy. 1898. "Shuswap Sheet." Old Maps 5T10. Land Title and Survey Authority of British Columbia, Victoria, B.C.

Gore, N.J., and A.W. Vowell. 1902. "Arrow Lake Indian Reserve." Kootenay 7. Land Title and Survey Authority of British Columbia, Victoria, B.C.

Green, Ashdown. 1865. "South Thompson River with a Few Trails and Early Settler's Houses [and Indian Houses, Kamloops to Little Shuswap Lake]." Roads & Trails 21T2. Land Title and Survey Authority of British Columbia, Victoria, B.C.

Jemmett, William. 1881. "Indian Reserve, 'Sahhakltkum' Adam's Lake Tribe. Yale District." Kamloops 15. Land Title and Survey Authority of British Columbia, Victoria, B.C.

Launders, J.B. n.d. "Columbia River Near Upper Arrow and Lower Arrow Lakes." Roads & Trails 26T1. Land Title and Survey Authority of British Columbia, Victoria, B.C.

McDonald, Archibald. 1827. "Map of Thompsons River District." Old Maps 8T1. Land Title and Survey Authority of British Columbia, Victoria, B.C.

Moberly, Walter. 1865. "Royal Engineers Collection Tray 1, Vol. 2, Book 3, 1865 by Moberly." Maps and Plans Vault, Royal Engineer Collections Tray FB Book 3/1784. Land Title and Survey Authority of British Columbia, Victoria, B.C.

Mohun, Edward. 1881. "Plan of the Spellamcheen Indian Reserves, Yale District, British Columbia." Kamloops 18. Land Title and Survey Authority of British Columbia, Victoria, B.C.

Turnbull, J. 1861. "Rough Sketch of East Bank of Thompson River Shewing the Relative Position of Present Mule Trail and New Line of Waggon Road." Roads & Trails 12T2 & 11T2. Land Title and Survey Authority of British Columbia, Victoria, B.C.

Turnbull, James. 1865. "Plan of the Columbia River District Shewing the Routes Explored by Messrs. Moberly, Green & Turnbull, 1865-1866." Facsimile No. 93, 1982; Miscellaneous 8T2. Land Title and Survey Authority of British Columbia, Victoria, B.C.

Turner, Geo. 1865. "British Columbia: Columbia River (Part of) Explored by Mr. Geo Turner, 5th January, 1865." Miscellaneous 11T2. Land Title and Survey Authority of British Columbia, Victoria, B.C.

Vernon, F.G. 1887. “Plan of the Shuswap Indian Reserve, Kootenay District.” Kootenay 5. Land Title and Survey Authority of British Columbia, Victoria, B.C.

———. 1889a. “Plan No. 2 of the Adams Lake Indian Reserves Yale District British Columbia.” Kamloops 19. Land Title and Survey Authority of British Columbia, Victoria, B.C.

———. 1889b. “Plan of the Salmon Arm Indian Reserves Allotted to the Niskahnilth, Adams Lake, & Little Shuswap Lake Tribes in Common. Yale District, BC.” Kamloops 25. Land Title and Survey Authority of British Columbia, Victoria, B.C.

APPENDIX G, SECWEPEMC CONCERNS AND RESPONSE LETTERS PROVIDED TO BC HYDRO

APPENDIX H, SECWEPEMC PLACE NAMES WITHIN THE LSA PROVIDED BY SPLATSIN

Secwepemc	Anglican	Translation	Source
Sxwnitkwa	Arrow Lakes		Casimir Felix
Sts'ek'kin	Revelstoke	connected	Francis Thomas
Stilthn	Selkirk Mountains	(mountain peaks)	Casimir Felix