UPPER NICOLA BAND
TRADITIONAL USE STUDY
FOR THE
KINDER MORGAN TRANS MOUNTAIN PIPELINE EXPANSION

November 28, 2014

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Upper Nicola Band would like to thank the Community Elders and Cultural Advisors who so graciously shared their time and knowledge with us to complete this report. Upper Nicola would also like to acknowledge Kinder Morgan Canada Inc.'s role in enabling the Band to conduct the Traditional Use Study for its Project's environmental review. Upper Nicola is of the opinion that by the community conducting this study, in contrast to Kinder Morgan Canada Inc. staff or their consultants, the information contained herein is far more meaningful for the Upper Nicola Band, the project applicant, and those reviewing the Kinder Morgan's submission to the National Energy Board for it is based on and relays Traditional Use Values, and Traditional Knowledge as only a community can do for itself.

Cover Photograph Credit:

Douglas Lake, Upper Nicola Band's Area of Responsibility, Syilx Territory. © Krista Belle Stewart

1 EXECUTIVE SUMMARY

In operation since 1953, the Trans Mountain pipeline (TMPL) system currently has a capacity of approximately 300,000 barrels/day (bbl/d). The TMPL system transports a range of crude oil and petroleum products from western Canada to locations in central and south western British Columbia, Washington, and offshore. Kinder Morgan Trans Mountain proposes to expand the existing TMPL system by 93,800 m^3/d (590,000 bbl/d), from 47,690 m^3d (300,000 bbl/d) to 141,500 m^3/d (890,00 bbl/d). If approved, the proposed expansion (the Project) will comprise: Pipeline facilities that complete a twinning of the existing pipeline in Alberta and British Columbia with approximately 981 km of new buried pipeline; new and modified facilities, such as pumping stations and tanks; and, additional tanker loading facilities at the Westridge Marine Terminal in Burnaby, British Columbia.

The existing TMPL and proposed expansion intersect a large portion, approximately 130 km, of Syilx Territory within Upper Nicola Band's Area of Responsibility and has the potential to affect Syilx Aboriginal Title, Rights, and interests. In response this Traditional Use Study (TUS) was completed to better understand the potential effects of the Project on UNB Traditional Use Values. In the context of TUS, a Traditional Use (TU) 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 interests and use, including Aboriginal Rights and Title, in the region.

The objectives of this TUS are to:

- Identify TU Values in the Local Study Area (LSA) and to assist the Upper Nicola Band in assessing the potential effects of the proposed Project on both these TU Values and their broader Title, Rights, and interests. This includes collection of information relating to potential impacts of the development on UNB TU Values and interests in the vicinity of the Project;
- Build capacity within the Upper Nicola Band to conduct their own TUS; and,
- Collect current and prior TUS research, oral history and historic documents in a spatial database.

This report is based on twenty-three (23) TUS indoor interviews with Upper Nicola Band Cultural Advisors and one community workshop. A review of existing land use information relevant to the LSA was also completed to supplement the information reported by UNB Cultural Advisors. The Local Study Area (LSA) for this TUS is comprised of the Trans Mountain Pipeline Expansion Project Study

Corridor[1] and an additional buffer. The LSA is limited to the extent of the Study Corridor that intersects with the Syilx (Okanagan) Territory Boundary (the RSA). The Regional Study Area (RSA) is comprised of the Syilx Territory, which includes the Upper Nicola Band's Area of Responsibility (see Figure 1). As part of the Syilx Nation, the Upper Nicola Band defines as their Traditional Territory the entirety of the Syilx Territory. This Territory largely encompasses the extent of UNB Traditional Use Values and from a Traditional Use perspective is understood as the regional context for this TUS. This RSA is specific to UNB and this TUS and differs from those used by Kinder Morgan in their studies for the Project.

Within the context of this Traditional Use Study, the LSA is considered, in the absence of spills or accidents, to be an estimate of the area with the potential to be directly affected by the Project during construction and operation. At the time of writing, the authors do not have details on Project footprint, slope, and watershed boundaries that would be required to assess the impacts of potential pipeline spills. Although UNB requested detailed spatial data of the Trans Mountain pipeline system, Kinder Morgan provided a Project "Study Corridor" with a width of approximately 150 metres and indicated that the new pipeline would be constructed within this Study Corridor. Without clarification of the location of the proposed new pipeline within this Study Corridor, it is assumed that the pipeline could in places be constructed along the edges of the Study Corridor and as a result required additional buffering when considering an appropriate LSA to encompass the majority of direct effects on TU Values. A 500m buffer was added to the Study Corridor based on professional experience of a conservative distance within which Traditional Use Values have the potential to be directly impacted by pipeline construction and operation.

Buffers are useful to the extent that if Upper Nicola Band community members can see, smell or hear an industrial development from the location of a Traditional Use Value this will often degrade or destroy the value of the site. For example, 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 Traditional Use Values kilometres from a project footprint. In addition to the 500m buffer along the Study Corridor, a 1km buffer was added around above-ground pumping stations

[1]. As provided by Kinder Morgan Canada Inc. April 2, 2014 plus a 500m buffer.

to account for safety when firing rifles as well as greater noise and visibility of above ground facilities. Noise, dust, air quality, odours and personal safety as well as the resultant threats to health can adversely and directly impact the availability, quality of resources, and the experience for Upper Nicola Band land Users exercising Aboriginal Rights. The 1km estimated distance of impacts of direct disturbances to TU Values from pumping stations remains a highly conservative buffer distance.

Over the course of the twenty-three (23) TUS Interviews with eighteen (18) UNB Cultural Advisors, there were 779 Site-Specific Traditional Use Values mapped, 273 of which are within, or intersect, the LSA. These sites and areas were grouped together within Traditional Use Value categories to indicate their importance as Cultural/Spiritual Values, Habitation Values, Indigenous Landscape Values, Subsistence Values, Transportation Values, Critical Wildlife/Ecological Values, and Commercial Values. The 273 TU Values depicted on Figure 3 and Figure 4 cover 100% of the LSA and represent multiple Traditional Use Values from all seven of the Traditional Use Value categories. Of particular concern among the 273 TU Values in the LSA are currently utilized highly valued hunting areas, fishing sites, important fish spawning areas, berry picking areas, medicinal plant gathering areas, sacred sites and sites important for traditional ceremonies. Spending time on the land, fishing, harvesting plants and animals, and practicing other cultural activities are crucial to UNB culture and identity as Syilx people. The proposed Project is anticipated to impact these UNB TU Values in the LSA and as a result impact Syilx Aboriginal Rights and Title.

Further to the impacted Site-Specific Traditional Use Values from TUS interviews, Cultural Advisors and other community members at the community workshop discussed specific concerns with the potential effects of the Project. These potential effects are related to the degradation or loss of Upper Nicola Traditional Use Values, impacts to the land and water and Aboriginal Rights and Title. These were documented and are expressed as the following concerns:

1. Concerns with the construction of the original Trans Mountain Pipeline, including twinning;
2. Project Impacts on watersheds and water crossings, including disturbances on fish, wildlife and birds;
3. Concern over oil spills and industrial accidents;
4. Concern over liability/responsibility to heal the land in case of accident;
5. Concern over culture loss/sustaining way of life;
6. Lack of respect shown for land and Cultural/Spiritual Values;

7. Loss of access to land and resources;
8. Destruction of land due to road building;
9. The herbicides being used on the pipeline right of way;
10. Long term effects of building pipelines; and,
11. Cumulative Impacts of development, including impacts from climate change.

The potential effects of the Project were assessed based on the shared community concerns, direct project effects on Traditional Use Values and the professional experience of the report authors. Project effects include direct effects of clearing, construction, and operation of the pipeline on UNB Traditional Use Values. Further Project-related effects include noise, reduced access, taking up of land, habitat alteration and the avoidance of the Project area. UNB perceptions of both biophysical contamination and spiritual disruption from the Project will result in UNB members' avoidance of the Project area. As a result, the construction and operation of the Project would potentially render much of the LSA, which is approximately 16,339 hectares of Syilx Territory, unusable by UNB members.

Project-related effects must be considered within the context of interference with UNB's land base. Upper Nicola Band members already experience the Cumulative Effects of development on their Territory and access to areas considered safe for the practise of traditional activities are becoming scarce. Further development, such as through the proposed Project, will lead to further scarcity of spaces to carry out traditional activities due to construction and operation activities, security measures and potentially oil spills. The Traditional Use Values affected by the construction and operation of the Project and potentially destroyed in the event of a spill, are connected not only to current consumption of traditional foods and practicing of traditional culture, but also to future Traditional Use opportunities and to the continuation of UNB cultural identity and spiritual practices. Cultural Advisors interviewed for the TUS thus hold that the LSA is integral to the continued practice of their Aboriginal Rights and Title. Further, UNB has not been adequately consulted and compensated for the historical adverse impacts to TU Values and associated knowledge and cultural practises resulting from the original pipeline construction in 1953.

With specific regard to this Project, Upper Nicola Band is highly concerned about potential accident or natural-disaster risks for pipeline ruptures or spills. As detailed in Section 8 of the report, the assessment of Project-related effects indicates that effects are considered negative (adverse), local (and to some degree regional), long-term, and of high magnitude. Our assessment results

indicate that these Project-related effects would be (1) clearly distinguishable (2) could result in substantial changes in the overall use of lands and resources by UNB members, and (3) the degree to which the UNB has expressed strong concern about any additional pipeline developments in Syilx Territory, the lack of consultation and consideration regarding the impacts of the already existing pipeline, the potential for catastrophic impacts and community perceptions of anticipated Project effects result in strong concern in the community. As a result, this assessment of the Project-related effects, based on the information available to date, concludes that the Project-related effects on Syilx Aboriginal Title, Rights, and interests held by the Upper Nicola Band will be significant.

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1.1 Glossary of Terms

Aboriginal Rights: Rights of First Nations, Inuit and Metis that are recognized and affirmed in Canada under section 35(1) of the Canadian *Constitution Act* (1982).

Cultural Advisor: A Community Elder and other knowledgeable land user interviewed during a research project.

Cumulative Effects: A cumulative impact includes the total effect on a natural resource, ecosystem, or human community due to past, present, and future activities or actions of federal, non-federal, public, and private entities. Cumulative impacts may also include the effects of natural processes and events. Accordingly, there may be different cumulative impacts on different environmental resources.

Environmental Assessment: The process of identifying potential negative (adverse) and positive environmental, social, and economic impacts from a proposed industrial activity prior to its commencement. This can be used both to help decision makers in their deliberation of whether a proposed project should commence, as well as to formulate mitigation strategies for negative impacts.

Ground-truthing: The verification of the actual location of sites recorded on maps during interviews. Ground-truthing is done by physically going to these sites and marking their location using a topographic map or global information system.

Traditional Ecological Knowledge: "[T]he cumulative body of knowledge, practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment" (Berkes 1999:8).

Traditional Use: Indigenous use of the Land for harvesting plants and animals, and for other cultural purposes, based on knowledge and experience passed on through generations, based long long-term residence in a particular place.

Traditional Use Study: A type of social science investigation that brings together archival techniques with oral histories held by members of an Indigenous community to identify places and resources of value for the maintenance and reproduction of the society.

Traditional Use Value: In the context of Traditional 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 interests and use, including Aboriginal Rights and Title, in the region. A Site-Specific Value is one that is associated with a unique location mapped through interviews or other means. A Non-Site-Specific Value is one that, while important, was not, or could not be described spatially through mapping.

Upper Nicola Band's Area of Responsibility: A subsection of the Syilx (Okanagan) Territory, which has been recognized as central to Upper Nicola Traditional Use, is the UNB's Area of Responsibility. While the larger territory is shared by eight member communities of the Syilx (Okanagan) Nation, Upper Nicola Band is recognized as having particular stewardship responsibility within this portion of the territory.

Syilx Territory: The Upper Nicola Band recognizes the Syilx Nation Territory as the mapped extent of their Traditional Territory. The whole territory is shared by the eight Syilx Nation member communities.

1.2 List of Acronyms

BB/D: Barrels per Day
CEAA: Canadian Environmental Assessment Agency
CKK: Community KnowledgeKeeper
EA: Environmental Assessment
FEARO: Federal Environmental Assessment Review Office
GIS: Geographic Information System
GPS: Global Positioning System
HA: Hectare
ILM: Interior to Lower Mainland Transmission Corridor
KM: Kilometer
KV: Kilovolts
LSA: Local Study Area
M: Meter
NEB: National Energy Board
RSA: Regional Study Area
TMEP: Trans Mountain Expansion Project
TMPL: Trans Mountain Pipeline
TEK: Traditional Ecological Knowledge
TU: Traditional Use
TUS: Traditional Use Study
UNB: Upper Nicola Band

2 INTRODUCTION

This Traditional Use Study (TUS) was completed as a part of Upper Nicola Band's (UNB) participation in the regulatory process for the proposed Kinder Morgan Trans Mountain Pipeline Expansion Project (the Project). The purpose of this TUS is to identify past, present, and prospective future Upper Nicola Traditional Use Values that could be potentially affected by the Project.

This report opens with an overview of Kinder Morgan's proposed Project and is followed by a detailed community background, a review of relevant previously documented information, a summary of research objectives and research methodology, a discussion of the research findings, and a consideration of Project-related issues and assessment of Project-related effects on Syilx Title, Rights, and interests.

The UNB retained Kwusen Research & Media Ltd. to provide technical support in TUS research methods, as well as to provide support through the collection, analysis, and reporting phases of the research program related to the proposed Project. This final report was prepared for the UNB under the direction of Lynne Jorgesen with assistance from Stella Spak, PhD (Kwusen Research & Media Ltd.), Towagh Behr, M.A. (Kwusen Research & Media Ltd.), Susannah Machelak, M.A. (Kwusen Research & Media Ltd.), and Josh Hazelbower, B.A. (Kwusen Research & Media Ltd.).

2.1 Trans Mountain Pipeline Expansion Project

Kinder Morgan Canada and Trans Mountain Pipeline L.P. (Kinder Morgan) is proposing to undertake the Trans Mountain Pipeline Expansion Project (the Project). At the time this report was completed, Kinder Morgan has not provided Upper Nicola Band with spatial data of where the twinned pipeline is planned to be built. Kinder Morgan has provided spatial data of the 'Kinder Morgan Study Corridor', an area of approximately 150 metres wide, and approximately 130 kilometres long (within the RSA), within which Kinder Morgan is considering constructing the pipeline. Kinder Morgan did not provide UNB with a specific Project footprint and indicated only that the pipeline would be constructed within the Kinder Morgan Study Corridor. The Study Corridor, with the addition of adequate buffers, is the LSA. This is considered, in the absence of spills or accidents, to be an estimate of the area within which direct Project effects on Upper Nicola Band TU Values are likely to occur.

Below is Kinder Morgan's description of the existing Trans Mountain Pipeline (TMPL) and proposed expansion:

The TMPL system commenced operations 60 years ago and now transports a range of crude oil and petroleum products from Western Canada to locations in central and southwestern British Columbia (BC), Washington State and offshore. The TMPL system currently supplies much of the crude oil and refined products used in BC. The TMPL system is operated and maintained by staff located at Trans Mountain's regional and local offices in Alberta (Edmonton, Edson, and Jasper) and BC (Clearwater, Kamloops, Hope, Abbotsford, and Burnaby).

The TMPL system has an operating capacity of approximately 47,690 m3/d (300,000 bbl/d) using 23 active pump stations and 40 petroleum storage tanks. The expansion will increase the capacity of the TMPL system to 141,500 m3/d (890,000 bbl/d).

The proposed expansion will comprise the following:

- 994 km of new, buried pipeline segments that twin (or "loop") the existing pipeline in Alberta and B.C. (this includes 7 km of delivery line loops);
- New and modified facilities, including pump stations and tanks; and,
- Three new berths at the Westridge Marine Terminal in Burnaby, BC, each capable of handling Aframax class vessels.

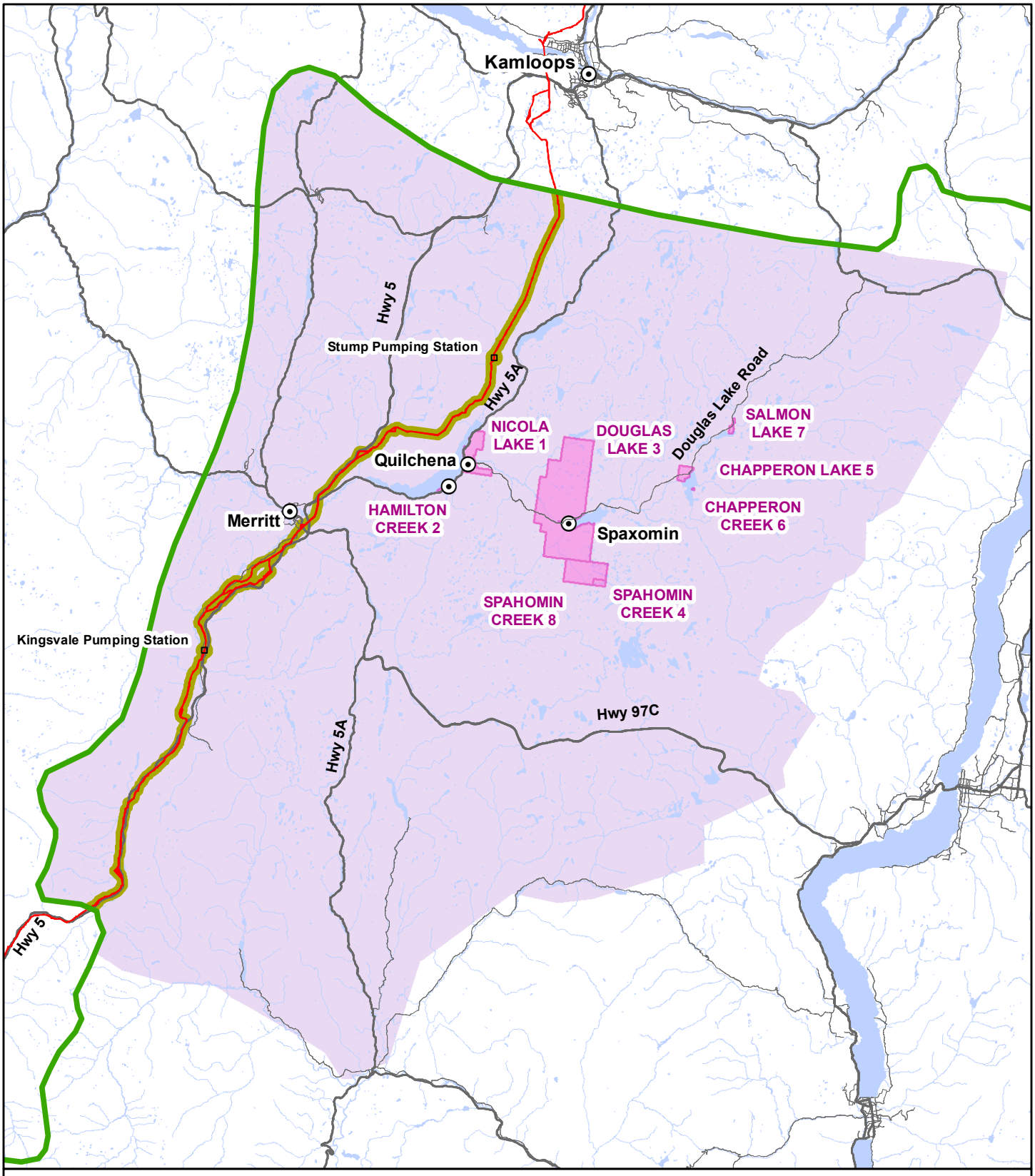
The Project Overview (Figure 1) shows the Syilx Territory Boundary (RSA), The Upper Nicola Band's Area of Responsibility, the Kinder Morgan Trans Mountain Pipeline Expansion Study Corridor, and Local Study Area (LSA).

The components of the Project as described above that this TUS intends to address in its assessment of potential impacts to Upper Nicola Traditional Use Values are:

- New pipeline segments that are within Upper Nicola Band's Area of Responsibility; and,
- New and modified facilities, including pumping stations and tanks, that are within Upper Nicola Band's Area of Responsibility.

Although the data was requested and the standard practice of the authors would be to include associated right-of-ways, access roads, and similar infrastructure, Kinder Morgan provided no details of these ancillary developments. As a result we are unable to include these developments in the TUS and the assessment of their potential impacts to Upper Nicola Band Traditional Use Values has not been completed.

The Project requires the approval of its Certificate of Public Convenience and Necessity (CPCN) pursuant to Section 52 of the *National Energy Board Act* to permit construction and operation of the expanded TMPL system.



Syilx Territory and Study Areas

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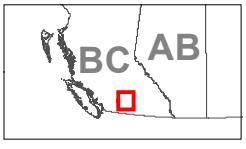
Projection: NAD 83 UTM Zone 12N

- Syilx Territory Boundary
- Upper Nicola Band's Area of Responsibility
- Kinder Morgan Study Corridor
- Local Study Area
- Upper Nicola Band Reserves
- Waterbodies
- Roads
- Cities/Towns/Villages
- Pumping Stations



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Basemap Data Sources: Government of Canada

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3 BACKGROUND

The main communities of the Upper Nicola Band (UNB) are located approximately 45 km east of Merritt and 90 km south of Kamloops, British Columbia. Upper Nicola has eight reserves, all of which are located near Nicola Lake and Douglas Lake. Upper Nicola's two main residential communities are located on Nicola Lake (IR #1), and at the west end of Douglas Lake (IR #3). These communities are known as Spaxomin (Douglas Lake) and Quilchena (Nicola Lake). The reserves comprise approximately 30,848 acres that span a range of 50 kilometers along Highway 5A beginning on western shore of Nicola Lake and east along Douglas Lake Road to Salmon Lake (Upper Nicola Band 2014).

The current population of the UNB stands at approximately 900 members, about half of whom live in the communities of Spaxomin and Quilchena. The Upper Nicola Band is one of seven Canadian Bands that belong to the Okanagan Nation Alliance. The Upper Nicola Band is also affiliated with the Nicola Tribal Association, which consists of seven Nlaka'pamux (Thompson) and one Syilx (Okanagan) Nation Bands (Upper Nicola Band 2014.).

The Upper Nicola is the only Syilx community in the Nicola watershed. In the 18th century, Syilx people began to permanently inhabit the Upper Nicola and Salmon River watersheds as a result of the Fish Lake Accord with the Kamloops Secwepemc (Teit 1930; Manuel and Jorgesen 2003). With the Okanagan Indian Band in Vernon, the UNB comprise the most northern extent of the Syilx language, Nsyilxcən, which is an Interior Salish language (Kennedy and Bouchard 1998). The area of the Nicola Valley has always been an important hub for the Syilx and Nlaka'pamux, peoples and their Secwepemc (Shuswap) neighbours. In addition to these Interior Salish groups, there was also a recorded Athabascan (Stuwix) presence (Teit and Boas 1900; Wyatt 1972). However, by the end of the nineteenth century, these people had joined the neighbouring Syilx or Nlaka'pamux communities, either through intermarriage or adoption (Boas 1925; Teit and Boas 1900, Teit 1930; Wyatt 1972). See Figure 2 for a depiction of the territorial extent of the Nsyilxcən and neighbouring language groups (for more discussion on Plateau languages, see Kinkade *et al.* 1998).

According to Kennedy and Bouchard (1998), the distinction between the northern and southern divisions of the Okanagan did not exist prior to Leslie Spier's classification (Spier 1938, as cited by Kennedy and Bouchard 1998:238). However, in earlier texts written by ethnographer James Teit (1930), the Okanagan had at least two recognized divisions (with the Similkameen considered as an additional division). Teit noted that the Nicola Syilx, with headquarters at Spaxomin,

belonged to the Upper Okanagan or Lake Okanagan division (1930:203-204). Kennedy and Bouchard (1998) further maintained this distinction of northern and southern Okanagan in their chapter detailing some of the cultural traits, history, and language of the Northern Okanagan, Lakes, and Colville in *The Handbook of North American Indians*. Other early writings on the Syilx can be found in texts by the Director of the Canadian Geographic Survey, George Dawson (1891), and early twentieth-century anthropologist, Charles Hill-Tout (1911, reprinted 1978). These texts, along with the prolific output by Teit (Teit and Boas 1900; 1930) provide descriptions of the cultural traditions, oral histories, and written histories of the Upper Nicola Band.

At the time of his writing, in 1930, Teit observed that the Okanagan of British Columba included seven bands, with as many chiefs. Of these bands, four belonged to the Okanagan and three to the Similkameen. Included among this seven is Spā'x̣amEn or Spā'x̣EmEn ("a shaving", "paring", or "shave", "bare", "smooth"), or Douglas Lake Band. Teit noted their headquarters at Spā'x̣amEn or Douglas Lake, on the Upper Nicola River. In addition to this large village of Spā'x̣amEn, other villages of the Douglas Lake Band included a small settlement know as Komkona'tko or KomkEna'tku ("head water") at Fish Lake on the headwaters of the Upper Nicola River, and Kā'łEmīx ("bushes", or "willow bushes"), a fairly large village near Guichons on the mouth of the Upper Nicola River, where it flows into the Nicola Lake, and Kwiltca'na ("red -----") at the mouth of Quilchena Creek. Teit noted that the latter village was so named because of the red bluffs on the side of the valley a short distance up the creek. However, while this small village was counted as belonging to the Douglas Lake Band, the Thompsons claimed the country along the creeks (including upstream of Quilchena Creek), and the people were mostly of the Thompson tribe (Teit 1930: 206). Today the village of Kā'łEmīx (on UNB IR #1) has become known as Quilchena.

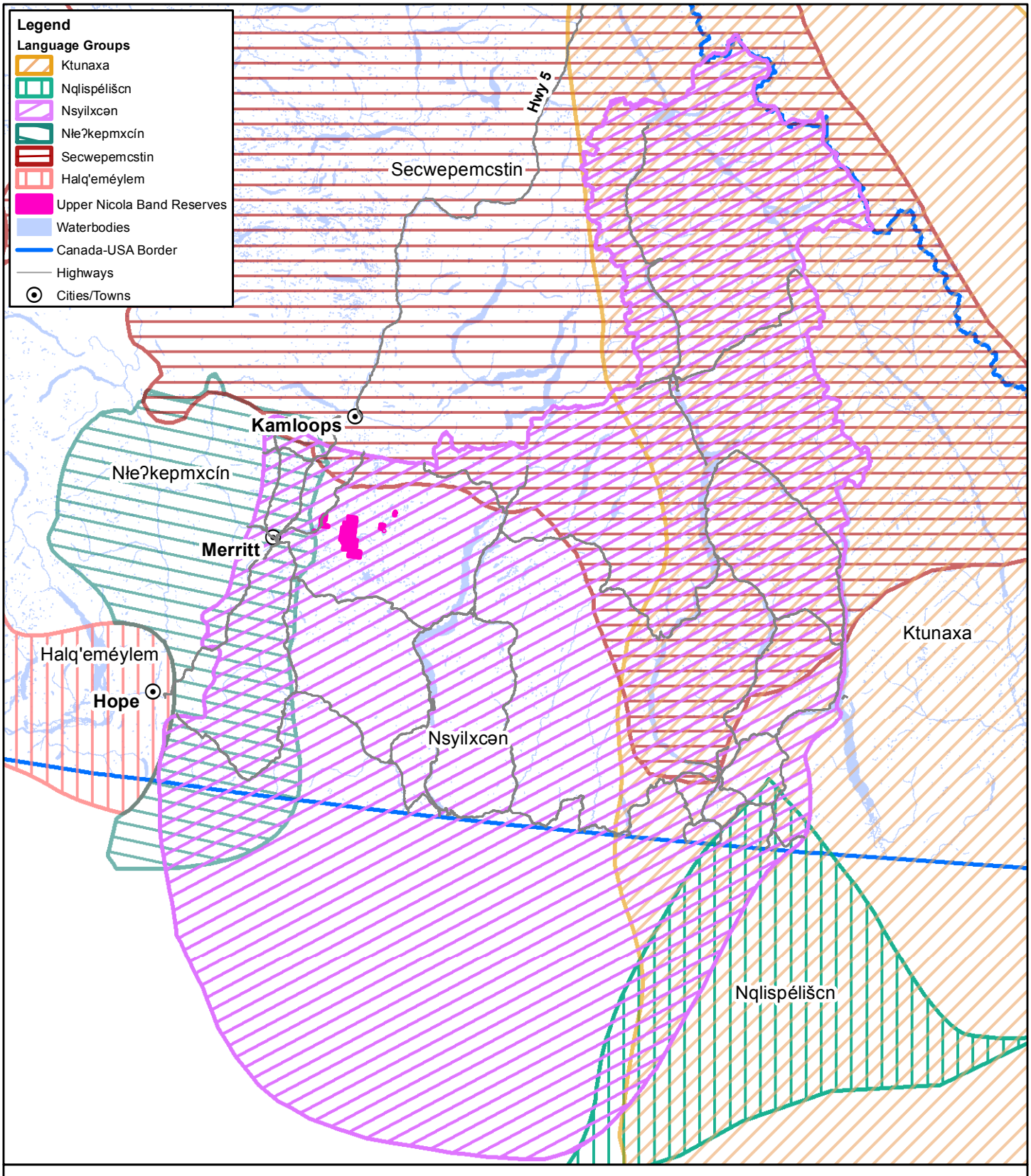

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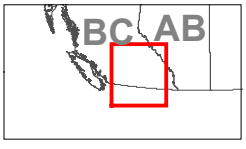
Figure 2: Nsyilxcən and Neighbouring Language Groups



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3.1 The Fish Lake Accord

The history of the Upper Nicola Band and their coming to occupy the northwest portion of Syilx territory is succinctly summarized by Manuel and Jorgesen (2003) in their paper on the Fish Lake Accord, as well in Teit (1930). Kennedy and Bouchard (1998) describe the movement of the Syilx in the eighteenth century westward from the head of Okanagan Lake to the Upper Nicola Valley, displacing Secwepemc hunters who had hunted in this upland area since the 1700s. Following this, the Douglas Lake area was ceded to the Syilx who established permanent settlements there by the mid-1800s. The agreement that allowed for this movement and subsequent resettlement, known as the Fish Lake Accord, is an unbroken eighteenth century treaty between the Kamloops people, as represented by their chief Kwolila (*Kwolī'la*) and his half-brother, Chief Pelkamulox II (*PƐlkamū'lôẋ*) of the Syilx (LeBourdais 2009: 10). This pre-1846 peace treaty provided a land base for Pelkamulox II (*PƐlkamū'lôẋ*) and his people, known today as the Upper Nicola Band. The Fish Lake Accord established the right of Pelkamulox II (*PƐlkamū'lôẋ*), his people and their descendants, to occupy what is now the northwest portion of Syilx territory (Manuel and Jorgesen 2003:1).

It was through this "lasting" and "friendly agreement" (Teit 1930:266) that the Syilx from the upper part of Okanagan Lake, considered close relatives by Secwepemc, Nlaka'pamux, and Stuwi'x through intermarriage, established a permanent settlement in the area around Douglas Lake. Teit relayed what he had been told about this agreement:

> Here at Fish Lake *Kwolī'la* made a lasting agreement with *PƐlkamū'lôẋ* giving him the perpetual use of all the Shuswap territory of the upper Nicola Valley, south, east, and west of Chaperon (sic) Lake, comprising Douglas Lake and Fish Lake. The *Stuwī'ẋƐmux^{u}* and *Ntłākya'pămaux* held the county west and south around Nicola Lake and Minnie Lake to the Similkameen. *Kwolī'la* said, "You will have the country for yourself and your people as your own. I will live as your neighbor at *Toẋoẋoi'tcƐn* (Chaperon (sic) Lake) and will retain all the country from there north. You will make Fish Lake your headquarters in the summer and I will summer at Chaperon (sic) Lake so that we may be close neighbours part of each year. You will give me your daughter *Kokoimālks*, to be my foster child and she will always live with me, but your son you will keep with yourself." *PƐlkamū'lôẋ* had only two children at this time, both of them very young. After this *PƐlkamū'lôẋ* and most of his people spent their

> summers in their new country with headquarters around Fish Lake and Douglas Lake, and in the wintertime lived at *Nkama'pElEks*. Henceforth *Sali'lxu* was deserted of permanent inhabitants and was no longer the main village of the Okanagon (sic). Those people who did not go with *PElkamū'lôx̣* moved north to different parts of the Okanagon (sic) Lake country and especially to the head of the lake around *Nkama'pElEks*. The latter place became an important Okanagon (sic) center. Not many years after this, owing to its fine grazing, many of the people of the old *Salī'łx*^{u} band, and others of the *Nkama'pElEks* band, who were now much mixed with them, began to winter around Douglas Lake and Fish Lake, forming as it were a new band. However, even up to the present day they look upon themselves as merely an offshoot of the *Nkama'pElEks* and Okanagon (sic) people, and as really one with them (Teit 1930:266).

Former Chief Tim Manuel in his address to the Standing Senate Committee, Kelowna 2009, described the ongoing significance of the Fish Lake Accord for the UNB and their neighbours. In his opening remarks, Chief Manuel situated the Upper Nicola Band in their present location with reference to the Fish Lake Accord:

> We are part of the Okanagan Nation. We are situated in a very unique area. We have the Secwepemc to the north, the Shuswap, the Nlaka'pamux to the west, which is the Thompson. Our language is Okanagan, although we are not in the Okanagan watershed, we are in the Nicola watershed. The reason that we were put there was to mediate between the Shuswap and Okanagan in the mid-1700s. It was a war between the two nations, and what we call the Fish Lake Accord and the Shuswap-Okanagan Confederacy was established to stop the warring and build and strengthen the relationship (Manuel 2009).

The presence of Secwepemc place names in the vicinity of Douglas Lake further demonstrates this history of Nation-to-Nation relationships. The subject of whether these names should be changed to Syilx names has been discussed by the Upper Nicola Band. The community decided, however, to maintain the Secwepemc names as these names are regarded as reminders that the territory was given to the Syilx from the Secwepemc through the Fish Lake Accord. This ongoing connection to their relationship and history of Nationhood protocols is

renewed regularly in a meeting of the Syilx and Secwepemc to reaffirm the accord (Jorgesen, communication 2014).

Sexqéltkemc Technical Coordinator Sunny LeBourdais further articulated the significance of this agreement. LeBourdais describes the Fish Lake Accord as a pre-Confederation treaty designed to reallocate the boundaries between Secwepemc and Douglas Lake Syilx territory. She wrote:

> This treaty is remembered to this day by the people of Sp'axmen (Douglas Lake) and the Secwepemc people of the Tk'emlups Division as the "Fish Lake Accord." It tells us important things about the very existence of indigenous, pre-contact treaty-making among the Nations, and of the mechanisms by which our peoples' (sic) approached, negotiated and maintained such treaties: Pelk'amulox and Kwolila reminded each other that they were brothers, in that both were the sons of the first Pelkamulox; the Douglas Lake chief was his son by a Spokane Okanagan mother, and the Kamloops chief was his son by a Tk'emlúpsemc (Kamloops Secwepemc) mother. Reminding each other of their close blood ties as uqw'iyéws ("brothers to each other") is what allowed them to reconnect and to establish a relationship on the basis of blood relationship . . . Living side by side during the summer season allowed them to implement the shared boundaries and land use, and to maintain peaceful relations in the spirit of relatives. In exchange for giving up part of the land that the Secwepemc had advanced into, he asked Pelkamulox to surrender his daughter, but not his son, to him, to be adopted and raised by him. Having been raised among the Tk'emlups Secwepemc, Kokoimalks would marry into the Secwepemc Nation, thus further consolidating the kinship alliance between the two groups (LeBourdais 2009:10).

This deep history demonstrating the Upper Nicola Band's interest in their lands, and the robust history of political decision-making involving land use and territory is a clear theme in the ethnographic and historical literature. As Feltes (2011) states, agreements such as the Fish Lake Accord between the Secwepemc and Syilx are inter-Tribal relations rooted in principles of mutual self-determination, respect for territorial boundaries, peace, kinship, and sharing. These principles were also repeatedly articulated in the interviews with Cultural Advisors conducted for this Traditional Use Study. Upper Nicola Band members continue to retain knowledge of the land, resources, and their cultural uses into the present.

It was from the position of political engagement, demonstrated by the Fish Lake Accord, that the Upper Nicola, along with other Interior Nations responded to increasing colonial interference beginning in the mid-1800s. Their strategies of resistance were consistent in the ways through which Upper Nicola Band and their allies responded to economic and political marginalization and interference with their land base.

3.2 Colonial History

The advent of the fur trade in the region in the early nineteenth century brought changes in non-Aboriginal land use to the area. Traders arrived, utilized existing travel routes, and developed relationships with First Nations people throughout the area. Teit (1930) described the famous head chief of the Syilx, Hwistesmetx'qEn, "Walking Grizzly Bear", who lived from approximately 1780 to 1865, as being critical to the success of early fur trade.

The name of the area now known today as the Nicola Valley comes from Chief Hwistesmetx'qEn. French Canadian traders who ran the temporary trading post at the head of Okanagan Lake gave him his French name, Nicolas. Teit, noting Chief Nicolas' (Nkwala's) notoriety, stated that "This man became an even more famous chief than his father and the Nicola Valley, Nicola River, and Nicola Lake are named after him" (Teit 1930:268). It was during his lifetime that the Syilx and neighbouring groups became acquainted with Europeans, first with fur traders in the early nineteenth century, and then with gold miners and settlers beginning in the mid-1860s (Teit 1930: 269).

Throughout the colonial period The Upper Nicola Syilx, along with the other Interior First Nations, strategically engaged with the settler governments in order to address the increasing interference with their lands. It was during this period, as well as in the years following the 1871 entry of British Columbia into Confederation, that Indian Reserves were created for Syilx communities. The Terms of Union, transferring all dealings with First Nations in British Columbia to Ottawa, brought uncertainty to the much-disputed division of powers between the Dominion and the new province (Harris 2002). The important issues of how Aboriginal Title would be handled and how much land would be allocated in reserves were tangled in this new relationship between Ottawa and Victoria. Between 1871 and 1876 this argument was at a stalemate. An attempted Joint Indian Reserve Commission came next, then from early 1878 to 1880, a single Indian Reserve Commission, lead by Gilbert Malcolm Sproat, was responsible to

both Ottawa and Victoria and tasked to settle these vexing questions (Harris 2002). Despite reserve allocations and boundary disputes that continue to this day, a number of reserves were laid out in the late 1800s.

Over the decades following British Columbia's entry into Confederation and the reserve creation period, it became clear that the province, and the men who had crafted the land policy which encouraged settlement in British Columbia, were in control and with the full support of Ottawa. Sproat resigned as Reserve Commissioner and Joseph Trutch was made the Confidential Agent in Victoria of the Dominion Government with "an advisory interest in Indian Matters" (Harris 2002:164). Between the passing of the *Indian Act* in 1876, and the formal transfer of most of the Indian Reserves in the province to the Dominion in 1938, the details of official policies were being negotiated between the federal and provincial governments. Although not recognized as official participants in these negotiations, Upper Nicola, along with their allies in the Interior Tribes of B.C. participated in a number of political interventions repeatedly asserted their Title and Rights to their lands. (Harris 2002; Wickwire 1998).

In the decades between the completion of the Canadian Pacific Railway in 1886 and the beginning of the First World War in 1914, tensions surrounding settler encroachment reached an apex. As a result of the growing non-Native population of British Columbia (from 1000 people in 1854 to 178,000 in 1901), First Nations began to worry increasingly about their loss of access to resources, economic marginalization, and increasing institutionalized discrimination and racism (Wickwire 1998:209). During this time political protest was also becoming more organized. In 1904 Douglas Lake Chief, Chillihitza, along with Chief Louis of Kamloops, and Oblate missionary Father J. M. LeJeune, travelled to England in an attempt to meet with King Edward VII in order to raise their grievances. Unsuccessful in this endeavour, the chiefs continued on to Rome for an audience with Pope Leo XIII (Wickwire 1998:210).

In the following years, interior and coastal chiefs undertook a number of additional political initiatives. In 1906, two coastal chiefs and one interior chief travelled to England with a petition for King Edward VIII. The chiefs were able to gain an audience with the King but were unable to present their petition directly to him. Instead, the chiefs were asked to submit their petition to the King through the Canadian government (Wickwire 1998:210). In July 1908 a four-page petition entitled "Prayer of Indian Chiefs" was submitted to A.W. Vowell, the Superintendent General of Indian Affairs. This document included a strongly worded list of demands, including the need for better schools, resident doctors,

care for their elderly and disabled, and compensation for railway rights-of-way through their lands (Wickwire 1998:211).

Later, in 1910, rooted in their robust political and legal histories, Syilx, Secwepemc, and Nlaka'pamux chiefs produced a declaration articulating their grievances with the existing "land questions" (Galois 1992:9) invoking the Royal Proclamation of 1763 (Wickwire 1998:213). Joining in with the ongoing efforts of the Indian Rights Association, an organization based on the coast and representing coastal tribes, these chiefs sought to settle their grievances against the British Columbia government before the Privy Council in London, England.

Between the establishment of the *Indian Act* (without consultation or input from First Nations) and the federal and provincial squabbling over the laying out of reserves, the growing Indian Rights movement continued to assert a nation-to-nation relationship with the federal government and the Crown. Engaging ethnographer James Teit as secretary-treasurer in 1909 (Galois 1992) the Interior Tribes of B.C. made a number of appeals to the Honour of the Crown. These appeals were based in the ideals of truth, justice, and reciprocity and called for their land and Title Rights to be ensured.

In a letter signed at Spences Bridge in July 1910, the chiefs of the Interior Tribes of B.C., including Chief John Chillihitza of Douglas Lake, made known their position with regard to the question of their rights and the policy of the provincial government. They stated their position as such:

> 1st We stand for treaty rights with the Dominion government, the same as all the Indian tribes in the other provinces of Canada and that all matters of present importance to the people of each of our tribes be subject to these treaties, so that we shall have a definite understanding regarding lands, water, timber, game, fish, etc. and we consider such other matters as schools, doctors, aid to the aged, Indian funds, etc., and general assistance by the government should be included in these treaties.
>
> 2nd We stand for compensation to us by the British Columbia government for all lands of ours appropriated, or held by them, including all lands pre-empted or bought by settlers, miners, lumbermen, etc.

3rd We stand for the enlargement of our reservations wherever we consider it necessary, by having sufficiency of land allotted to us so as to enable us to compete on better terms with the whites in the way of making a living.

4th We stand for the obtaining of a permanent and secure Title (to be acknowledged by the government as such) of our ownership of our present reservations, and of such lands as may be added thereto.

5th We stand for the carrying of our claims before the Privy Council of England for settlement, and in the event of our obtaining justice as we expect, we ask that such compensation as may be awarded us for our lands, etc., shall be paid to us, half of it in cash, and the other half to be retained by the Dominion government, and used as occasion may required for our benefit.

6th We ask for and expect the Dominion government to support us in our claims, and help us to obtain our rights to the best of their ability.

7th We believe the Indian Rights Association of B.C. (which has been formed by other Indians of this country) had the same object, and claims that we stand for, therefore we declare our agreement with the members of the same, and our resolve to join with them, and support them in the furtherance of our mutual interests, and the attainment of our rights.

8th We believe the Indian Rights Association of B.C. has hired Mr. Clark, K. C., of Toronto, to look after their interests and conduct their case in harmony with their desires, and those of the Dominion government, and we herby declare our agreement with this step, and our intention to support same financially, and otherwise, as well as we are able.

9th We agree that a copy of this statement be sent each to Mr. Oliver, Mr. Clark, the Secretary of Indian Rights Association, and the Nass River Chiefs, so that all may know exactly our position on these matters as we understand same has been misrepresented in some quarters (Indian Rights Association of British Columbia 1910).

This clear declaration was followed closely by the August 1910 document, *The Memorial to Sir Wilfrid Laurier, Premier of the Dominion of Canada* (commonly referred to as the *Laurier Memorial*). At this time, negotiations between the federal and provincial governments on "Indian issues" had stalled and Prime Minister Wilfrid Laurier visited British Columbia. On his stops in Prince Rupert, Vancouver, and Kamloops, Laurier received representatives from First Nations delegations. Both documents, the declaration excerpted above and the *Laurier Memorial*, were presented to Prime Minister Laurier in Kamloops while on his tour of the province.

The Laurier Memorial, explored in detail by Feltes (2011), continues to have deep relevance to this day within the communities of those who crafted it. The sophisticated political sentiment presented in *The Laurier Memorial* articulates the connection between political rights and relational rights and describes the history of the relations between Syilx, Secwepemc, and Nlaka'pamux Nations and the settler populations. It also presents (and continues to represent) a different vision of relations based on shared jurisdiction, traditional law, reciprocity, obligation, and mutual sovereignty. In *The Laurier Memorial*, the chiefs welcome the newcomers to share their territory, and invite them to share responsibility for it, pending their respect for Indigenous sovereignty and law (Feltes 2011:2).

Laurier's response was to propose a negotiation process with the Province to generate a judicial process for determining Aboriginal Title. He planned to refer claims to the Supreme Court and thus bring the issue of "Indian Title" to the national agenda to be addressed. However, in 1911 Laurier lost the federal election to Conservative Robert Borden. Borden quashed Laurier's proposal and instead enacted a series of policies intended to silence the resistance movement (Feltes 2011: 3). This approach was reflected–on the provincial side in British Columbia with Conservative Premier Richard McBride's refusal to cooperate in Title claims (Galois 1992:5-6).

After an unsuccessful meeting of ninety-six chiefs from sixty Interior and Coastal First Nations with Premier McBride and members of his cabinet in Victoria, where the delegation urged McBride to submit their claims of Aboriginal Title for adjudication, the chiefs once again met at Spences Bridge to draft an appeal to the federal minister of the Interior, Frank Oliver (Wickwire 1998:215-216).

This *Memorial to the Honourable Frank Oliver*, dated May 10, 1911, was signed by at least seven chiefs from the Nicola Valley, including Chief John Chilahitsa (Chillihitza), Douglas Lake Band, Okanagan Tribe. The signature list includes a

total of sixty-eight Chiefs, Acting Chiefs, Captains or designated representatives. The first eight signatories are Syilx leaders, followed by Secwepemc, Nlaka'pamux, Stalo, Ts'ilqo'tin, Carrier, and Tahltan. In the text of this *Memorial*, the authors clearly restate their protest regarding the Province's disregard of their rights and existing Title, as well as the creation of the reserve system. With regard to which they wrote:

> A few of the reserves may appear large on paper, but what amount of good land is in them? Most of them consist chiefly of more or less barren side hills, rock slides, timbered bottoms hard to clear, and arid flats devoid of water for irrigation. In very few places do we have any chance to have good farms, and they must of necessity be small in area. Either the land or the water is lacking. In many places even the total acreage of the reserves is exceedingly small. All parts of all reserves known to us are used by us one way and another as fully as possible, considering our present disadvantageous position, and the nature of the lands. If by occupancy Mr. McBride means actual living on or cultivating of each part of reserve, then we plead guilty to our inability to occupy the greater part of them, for we cannot live on and cultivate rocks, side hills and places where we can get no water (Chiefs of the Shuswap, Couteau or Thompson, Okanagan, Lillooet, Stalo or Lower Fraser, Chilcotin, Carrier, and Tahltan Tribes in the Interior of British Columbia 1911).

The Chiefs further went on to point out the inconsistences of Premier McBride's position and logic regarding the benefits that Interior First Nations derived from the developments in their territories. In response to McBride's position they wrote:

> Mr. McBride also said the Indians share in enjoying the advantages arising from building of railroads, wagon roads, trails and other Government utilities. Perhaps we do, but have we not assisted in building them and have they not been built up from the direct robbery of ourselves, and our country? We claim these are rightfully ours, and yet we are made to pay for using them. Had we never assisted in the making of these railways and roads; had his Government paid us for all our timber that was used, and all our fifty millions of gold taken out of this country, and all our salmon that has been caught, and destroyed, and many other things which might be mentioned that went into the making of these roads; had we been paid only a small share of all this wealth derived from the

> destruction (in most cases), not the improvement of our country; or had the country been bought from us, so it were actually the property of the whites to destroy or do with as they pleased, then the British Columbia Government might speak of our sharing in the benefits of roads to which they infer we are no way entitled. Good trails we had in plenty before the whites came. The whites area indebted to us for having them ready made when they came, and allowing them to use them without charge. The wagon roads benefit us but little, for most of them do not go to our reserves, and besides, we have no chance to have much produce to haul over them. Railroads have not helped us much. They cut up our little farms, and give us no adequate compensation. They have killed many of us, and also many of our horses and cattle since their advent. Besides they act as highways for robber whites, and all kinds of broken men who frequently break into our houses and steal from us (Chiefs of the Shuswap, Couteau or Thompson, Okanagan, Lillooet, Stalo or Lower Fraser, Chilcotin, Carrier, and Tahltan Tribes in the Interior of British Columbia 1911).

And further, with regard the so-called "benefits" derived from the developments in their territories, the authors of the 1911 *Memorial* stated:

> This, then, appears to be all the British Columbia Government can claim to have done for us, viz.: they let us use a few inferior spots of our own country to live on, and say we ought to be grateful to them for giving us such large places. They made some roads of various kinds for themselves, and say we ought to be grateful for being allowed to share in the use of them. We ask is this the brotherly help that was promised us in early days, or is it their compensation to us for the spoliation of our country, stealing of our lands, water, timber, pastures, our game, fish, roots, fruits, etc., and the introduction of diseases, poverty, hard labor, jails, unsuitable laws, whisky, and ever so many other things injurious to us? (Chiefs of the Shuswap, Couteau or Thompson, Okanagan, Lillooet, Stalo or Lower Fraser, Chilcotin, Carrier, and Tahltan Tribes in the Interior of British Columbia 1911).

Next, the Interior Tribes of B.C. and the Indian Rights Association. sent a delegation to Ottawa to present their grievances to Prime Minister Borden. Teit, along with nine chiefs met with Borden and members of his cabinet in January

1912, and four chiefs, including Douglas Lake chief John Chillihitza, delivered speeches (Wickwire 1998:216).

In his statement before the Prime Minister on this occasion, Chief Chillihitza recalled the specific promises of four government officials, including Sproat. These promises had been made to his father about the protection of the their land base. He said:

> They said they proposed to give the Indian tribes reserves, large pieces of land, and that they would be set apart and posts set in the ground and these posts would be the same as a high fence around them. And they said that the chiefs would be set down there as heads of these places and everything upon these lands which would be posted would be the real property of the Indians – the gold and silver and everything. They explained to the Indians that it would all be done for the safety of the Indians, as many whites would come to that country and wish lands, and they wanted the Indians to have a certain amount of their own country kept for them and saved from settlement by these whites. My father and the other Chiefs asked them what about these lands outside of the reserves, and the Commissioners said, "We will discuss these lands later" (Wickwire 1998:232-233).

Borden's response was to appoint J. A. J. McKenna as a Special Commissioner of Indian Affairs responsible for reaching an agreement with the province about the question of lands. The resulting joint federal-provincial McKenna-McBride Royal Commission on Indian Affairs was limited to matters concerning reserves: numbers, location, size, and the reversionary interest (Galois 1992:6). The question of Aboriginal Title, as claimed by First Nations people, was excluded from consideration. In the final report of the Commission, completed in 1916, it was recommended that 482 new reserves, encompassing 87,281 (mostly unusable) acres, be established and a total of 47,058 acres be "cut-off" from existing reserves. Any proceeds from the sale of these "cut-off" lands were to be divided equally between the provincial and the federal government (Galois 1992:6).

This proposed "solution" to the land question was wholly rejected by the Interior Tribes of B.C. and the Indian Rights Association, which by 1916, had joined to form the Allied Tribes of British Columbia. The McKenna-McBride Commission recommendations were rejected by the Allied Tribes of British Columbia due to the

lack of First Nations representation and for its manner of "settling" the reserves question without first settling the issue of Title. Following the conclusion of the First World War, the federal government returned its attention to the work of the Royal Commission. Over the vociferous objections of First Nations organizations, Bill 13 was passed in parliament and signed into law on July 1, 1920 authorizing full implementation of the McKenna-McBride Commission recommendations without regard for Aboriginal Title, treaties, or self-government (Wickwire 1998:222-224).

One theme that runs though every piece of documentation produced by the Upper Nicola Band and their allies during this period is the importance of the land to the their way of life. When, in 1927 an amendment to the *Indian Act* added a section that forbade First Nations from raising or accepting funds for claims, and therefore effectively barred them from engaging legal counsel or organizing support for land claims, the political momentum of the Allied Tribes was dispersed, to re-emerge in coming decades (Harris 2002:260).

Photograph 1: Ottawa 1916. Back row (l-r): Chief Elie Larue, Kamloops Band (Secwepemc); Chief John Tetlenitsa , Spences Bridge Band (Nlakapamux); James A. Teit; Chief Adolph Thomas, Lafontaine Band (St'at'imc); Chief William Pascal, Pemberton Band (St'at'imc). Front row, (l-r): Chief James Raitasket, Lillooet Band (St'at'imc); Chief John Chelahitsa, Douglas Lake Band (Syilx); Chief Paul David, Tobacco Plains Band (Ktunaxa); Chief Basil David, Bonaparte Band (Secwepemc). Canadian Museum of Civilization, no. 36002.

3.3 Recent History

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 affect Upper Nicola Band members 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 Syilx, including Upper Nicola Band, children were sent to attend the Kamloops Indian Industrial (later known as Residential) School or the Cranbrook (St. Eugene's) Indian Residential School.[2] Thus one could argue that the Government of Canada had set up the Residential School system in part in order to do away with the whole Aboriginal Rights issue through forced assimilation (Okanagan First Peoples 2008; Indigenous Foundations 2009).

The Upper Nicola Syilx lost access to many of the resources on their territory to pre-emption by European settlers and to the formation of the Douglas Lake Ranch (formerly known as the Douglas Lake Cattle Company). The Douglas Lake Ranch is the largest owner and leaseholder within the Band's territory and has greatly restricted members' access to previously utilized areas. Compounding this loss of access, have been numerous disputes regarding the ongoing use of these lands. The company has sought to develop lakes on land controlled by the ranch for commercial sport fishing and built a number of fishing resorts and lodges. The Upper Nicola Band, however, continues to assert their title to these lands and their right to use the same lakes for their own Traditional Uses (Harris 2002:313). In addition to the tensions surrounding the Douglas Lake Cattles Company, the Commonage Claim is another ongoing issue related to settler pre-emptions and the loss of land and resources for the Upper Nicola Band. This Specific Claim stems from the removal the Douglas Lake Commonage, a reserve surveyed for the Upper Nicola Band by Joint Indian Reserve Commissioner G. M. Sproat in 1878. The Upper Nicola continues to maintain their Syilx Rights and Title to these lands.

[2] 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).

`In addition to policies enabling settler pre-emptions a number of land use decisions were undertaken without the consultation or participation of impacted First Nations, including the construction of the original Trans Mountain Pipeline. In operation since October 1953, the Trans Mountain Pipeline was built to carry oil from Alberta to the southern coast of British Columbia. Since 1953, the capacity of the pipeline system has been increased a number of times by twinning parts of the line and adding associated facilities. The initial capacity was 150,000 barrels per day with four pumping stations along the line and a marine loading dock in Burnaby. Prior to the current proposed expansion, the most recent expansion of the Trans Mountain Pipeline was the Anchor Loop Project through Jasper National Park and Mount Robson Provincial Park. This was completed in 2008 (Kinder Morgan 2012:7).

In 1984 the province of British Columbia began construction of the three-phase Coquihalla Highway, a major transportation route connecting the interior of the province to the lower mainland. In a similar way to the earlier protest expressed by the authors of the 1911 *Memorial to Honourable Frank Oliver* (see Section 3.2) regarding the construction of railroads, wagon roads, trails, and other Government utilities to which they had "been paid only a small share of all this wealth derived from the destruction (in most cases), not the improvement of [their] country" (Chiefs of the Shuswap, Couteau or Thompson, Okanagan, Lillooet, Stalo or Lower Fraser, Chilcotin, Carrier, and Tahltan Tribes in the Interior of British Columbia 1911) the land use decisions which resulted in the construction of the Coquihalla Highway, existing Trans Mountain Pipeline, and the major transmission lines crossing Syilx Territory within the UNB' Area of Responsibility were undertaken without consultation or involvement of impacted First Nations. In recent years, B.C. Hydro's Interior to Lower Mainland Transmission Corridor was another transmission line project which has been proposed to cross UNB's lands and negatively impact resources and traditional activities. Through a court challenge and dialogue with BC Hydro UNB challenged this transmission line project and continues to assert their Title and Rights as a Nation.

In addition to responding to Rights and Title issues, the UNB has actively maintained their commitment to their culture and language education. N'Kwala School, opened in 1990, marked the UNB's emergence from the residential school era by returning control of education to the community. Located in the village of Spaxomin, N'Kwala School teaches both the provincial curriculum as well as Syilx history and culture and the Nsyilxcən language. The importance of this independent school is shared on the community's website:

> Having this school in our community provides us with the opportunity to focus on language, culture and art, sports and recreation, and ensure all students are performing well in academics. Our school's gym is also used for many community activities and events (Upper Nicola 2014).

Despite their loss of land, residential school experiences, and marginalized economic position, the Upper Nicola Band continues to assert and practice their Aboriginal Title, Rights, and Traditional Uses. The "good faith, friendliness and patience" that the Chiefs of the Syilx, Secwepemc, Nlaka'pamux, and others expressed in *The Laurier Memorial* toward the "guests" in their "homes" and "ranches" (1910:2) continued throughout the colonial and recent history. So too did their deep political engagement based in Syilx law and historical treaties such as the Fish Lake Accord.

4 SEASONAL SUBSISTENCE PATTERN

In the Nicola Valley, resources are available seasonally, in varying quantities, at diverse geographical locations, and at different elevations. The seasonal subsistence pattern followed by Upper Nicola community members, as it is practiced today, is consistent with what is detailed in the ethnographic and ethnobotanical literature. As articulated in interviews with Cultural Advisors for this TUS, the specific locations and seasons of plant and animal foods as they are known and utilized today have clear continuity with the pattern of earlier times.

Expressing the ongoing significance of the land a Cultural Advisor interviewed for this study stated:

> If you practice your Indian living you won't go hungry. Everything's alive out there. Like my grandfather told me. Yeah, as long as you know the foods you'll survive. Because, there's something growing every time of year (ID56).

The Syilx concept of tmix^{w}lax^{w} represents the relationship of the Syilx people to the land, all forms of life, and the spirit of the land. It is from this place of deeply woven engagement with the land and unfolding conception of being in the world that Upper Nicola Band situate themselves in relation to the land. The concept of tmix^{w}lax^{w} has a number of meanings including lands, season, environment, ecology, biosphere, and continuation; however, this concept is not easily articulated in English because of its deep and complex meanings.

As explained by language expert and educator Dr. Jeannette Armstrong, when you break the word down, "tm" refers to tmixw and "lahoolh" is a spiral, gyrating from year to year, the seasons spiralling over and over. "Lawh" means "the ground here", season to season to season, including the land as it is right now in the present. There is a hidden meaning too: at the beginning is "tm", which can be another way of saying something missing, like "tm skelow", or "no money". You can take it apart two ways, meaning there is nothing in space, and life exists in a spiral.

It also translates as many, many strands, like a braid, many strands that can be spread out from one source continuously, but it is still one. It is a very deep concept. The idea of mother earth, the land is our body like we are part of our mother's body, but we are only part of that body. It is not exactly the same idea as your mother, but we are all from the same body as the earth, the earth created us

in the same sense that a human mother created us (Jeannette Armstrong, personal comment to Lynne Jorgesen, July 21, 2005).

It should be noted that prior to the adoption of the Gregorian calendar the Upper Nicola Syilx followed a lunar calendar. In this way, the year was divided into four seasons embracing ten moons, and a fifth season embracing the rest of the year. The ten moons were generally called by number in addition to having descriptive names. The remaining moons were called collectively by the seasonal name of pEskaai' ("late fall") (Teit 1930: 247).

It has only been in the past few decades that academics and other researchers have become aware of the sophisticated techniques Indigenous People have employed to manage and maintain ecological resources (see Lewis and Ferguson 1988; Turner *et al.* 1990; Anderson 2006; Mann 2011). These methods include controlled burning, foraging strategies, selective harvesting, and cultivation techniques. In the past and continuing to today, UNB members employ strategies to promote sustainable management of key resources such as low intensity burning to encourage root, bulb, and berry production.

Turner *et al.* (1990) describe the use of resource management strategies including controlled burning, by which Upper Nicola and other Interior Plateau peoples 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).

Teit (1930) noted that the food of the Okanagan differed minimally from that of the neighbouring Thompson (Nlaka'pamux). The amounts of foods required were about the same, as were the methods of collections. Nearly all the families Teit spoke with moved about a good deal from one place to another, within their respective territories fishing, hunting, root digging, and harvesting berries, according to the season each food was at its best and most plentiful.

Upper Nicola Band members continue to retain much Traditional Environmental Knowledge (TEK, see Berkes 1999 *et al.,* for discussion of term). This system of knowledge that is handed down from one generation to the next through land-

based ways of life continues to inform Upper Nicola Band member's traditional system of land and resource management as well as cultural identity. Having an adequate land base to continue practicing traditional resource harvesting and management activities is thus not only crucial for the passing on of this TEK to younger generations, but also for the overall health and identity of Upper Nicola Band members. The younger generation can only truly learn who they are by spending time out on the land participating in these activities. Thus any real or perceived threats to the ability to continue living in respectful reciprocity with the animals and land who have provided the lifeblood of UNB culture since time immemorial not only has the potential to cause direct physical harm but also affects the psychological health of a people if they are denied their ability to continue following their traditional teachings (Alfred, McCarthy and Spak 2006). Below is a description of the seasonal land based activities of UNB members.

4.1 Winter:

In the winter, people remain in the main villages around Douglas Lake, Nicola Lake and Quilchena Creek, hunt and fish in the local area, and live off stores gathered from the previous months of subsistence activities. Kokanee, a species of non-migratory salmon, as well as Burbot, live in Douglas and Nicola lakes year-round and provide a valuable winter food source (James and Oliver 1991: 16).

UNB Cultural Advisors interviewed for the Spahomin Archaeological Inventory Project noted that in the past, winters were much more severe, with colder temperatures and more snow than present-day (James and Oliver 1991:41). The winter was know as "The Going in Time," when people first went inside their pithouses or kekuly (keekwilee) houses (semi-subterranean winter dwellings). A brief warming spell during the wintertime was known as "The Little Coming Out Time" (approximately mid-February according to Advisor Herb Manuel). It was during this time that people would temporarily move out of the kekuly houses into nearby tipis and to work areas. In these work areas people would do their weaving, sewing, hide tanning, and the men would work on their bows and arrows and moccasins. It was also during this "Little Coming Out Time" that the kekuly houses would be fumigated with sage brush and swept clean using goose wings. In order to get rid of the smell of the smoke, either coyote mint mixed with juniper and rosebush berries, or choke-cherry bushes would be burned after the sage brush. When the cold weather returned after a few days, families moved back into the kekuly houses for the remainder of the winter (James and Oliver 1991: 24-25).

In addition to local hunting by individuals or small groups, which occurred frequently, Teit (1930) wrote that there was mid-winter hunting for deer, and an important late-winter hunt for mountain sheep. He relayed a famous winter sheep-hunting story from the early part of the eighteenth century (the "grandmothers' day" of Teit's informant). This hunt occurred in the Ashnola district, and people from the neighbouring Similkameen Bands, and many others from the Thompson and Nicola Rivers, Okanagan Lake, and Columbia River partook (Teit 1930:243).

4.2 Spring:

The harvesting of plant foods begins in early spring with the digging of bulbs of cluster lilies and yellow bell from the dry hillsides along rivers. Following this, other roots, including balsamroot, nodding onion, mariposa lily, and bitterroot are ready for harvesting. Wild greens such as cow parsnip, fireweed, blackcap and thimbleberry shoots may also be harvested. The edible inner-bark (cambium) of ponderosa and lodge pole pines are harvested starting in spring, and by June, wild strawberries, salmon berries, wild currents, and some varieties of saskatoon berries are ready for harvest. The camas-harvesting season extends from the late spring throughout the summer (Turner *et al.* 1990:25-26).

The early spring fishery for the UNB was, and continues to be, very important. In the past the early spring fish runs provided a food source at a time when stored and preserved supplies were running low and people faced starvation (Jorgesen, personal communication 2014). After early spring fishing at Nicola Lake, people began to move toward Chapperon Lake for shiners, suckers, and other fish. Sproat recorded in his Field Minute that Chapperon Lake was "a favourite resort as fish can be caught earlier here than any other place in the district" and further that the settler, Guichon had told him that he had "seen a thousand Indians there at one time in spring – Nicolas, Similkameens, Okanagan, and Shuswaps" (Sproat 1878:24).

Good early spring sucker fishing at Trapp Lake, along with many other lakes along the route to Kamloops, is also recorded in the oral historical record (Bethell 1988, as cited by Burk *et al.* 2010:3; James and Oliver 1991: 31-32). From here UNB members moved to Peter Hope Lake and Glimpse Lake for more trout and small game hunting, then on to Pennask Lake. Large camps, of up to 1550 people, are recorded to have gathered at Salmon Lake for the spring trout fishery. These trout were also dried in large quantities for later consumption (James and Oliver 1991: 32). By this time in the spring deer hunting has also commenced (Bethell 1988, as

cited by Burk *et al.* 2010: 3). Eggs of waterfowl are also gathered in spring at all the large nesting places (Teit 1930: 246).

Pennask Lake was a traditional fishery for twelve First Nations communities that intensively fished its inlet and outlet, as well as adjacent Neveu Lake, for rainbow trout (Thoms 2002: 70). Starting in May groups traveled a trail from Spaxomin Creek to Pennask Lake gathering mushrooms and pine cambium along the way. The first family at Pennask would construct a weir and take as many fish as they needed. Then they would pass temporary ownership to the next family and so on. At Pennask Lake and Spaxomin Creek, semi-permanent drying racks were set up to catch enough fish to last until next season (Thoms 2002: 71). Pennask continues to be an important location for fishing and fish drying as well as a gathering place for families.

4.3 Summer:

Oral histories describe summer campgrounds at both the inlet and outlet of Peter Hope Lake and Glimpse Lake. These are choice fishing areas in the early summer (James and Oliver 1991:29-30). Summer time berry picking and root harvesting was and continues to be of great importance to the Upper Nicola Band. Root digging is carried on from summer through fall, either before or after blooming (Turner *et al*. 1990:25-26). Corbett Lake, including Voght Valley and Creek are noted as summer camping, root picking, and root drying areas (James and Oliver 1991: 36). Plant foods, including black tree lichen, mushrooms, green shoots, tree cambium, roots, and other underground parts, seeds, nuts and berries are harvested in summer. Berries including red huckleberries, soapberries, wild blackberries, wild gooseberries, and blueberries are harvested during this season. Choke cherries, blue elderberries, mountain ash fruits, and high bush cranberries are also ready in late summer and early fall (Turner *et al.* 1990:26). The area around Westwold is noted as a good berry picking and summer hunting area. Deer can be found on the high ridges in this area where they seek refuge from the bugs (James and Oliver 1991:31). Further, the areas around the Coquihalla Highway, and Coldwater and Coquihalla headwaters are highly valued for berry picking.

Many plants are stored for winter consumption. Roots are dried, either raw or following cooking; bitterroot and avalanche lily corms can be sun-dried, as can mushrooms and fruits, including berries (Kennedy and Bouchard 1998:242). While contemporary preserving techniques may differ in that UNB members have added new methods for preservation including salting, smoking, freezing, drying,

canning, making jams and jellies, to their repertoires, food preservation techniques are still practiced and highly valued by Cultural Advisors interviewed.

Ethnographic literature describes how people from throughout the region, including throughout the Northern Okanagan-Lakes-Colville territory, including Spokane, Flathead, Kootenai, Nez Perce, and Coeur d'Alene, camped at Kettle Falls fishery in July and August fishing chinook, coho, and sockeye salmon. Here people also traded, took part in competitions, and socialized. Salmon were caught using large J-shaped basket traps suspended over the falls. Individual fishers also used dip nets and harpoons (Kennedy and Bouchard 1998:241).

The literature further describes that at Okanagan Falls on the Okanagan River, and along the lower Similkameen River, the June run of chinook salmon was followed by sockeye. Sockeye was the main species fished by the people who gathered there (Kennedy and Bouchard 1998:242). These fisheries, however, were greatly reduced as a result of the construction of dams along the Columbia River and its tributaries in the early to mid twentieth-century. Substantial habitat for salmon, steelhead, and other fish species were blocked and anadromous fish runs were decimated as a direct result of the construction and operation of these dams (Coalition of Columbia Basin Tribes 2014: 2). Habitat restoration and salmon re-introduction initiative are now underway as part of larger ecosystems-based recovery programs in the Columbia and Okanagan River Basins (Okanagan Nation Alliance n.d.).

Three species of kokanee, a landlocked sockeye salmon, plentiful in several lakes throughout the Northern Okanagan region were and continue to be caught in large numbers and dried for winter use. Other fish of great economic importance through the Okanagan-Colville area include six species of suckerfish, two species of whitefish, ling cod, lamprey, Dolly Varden char, sturgeon, steelhead, rainbow, and cutthroat trout (Kennedy and Bouchard 1998: 241). See Appendix B for a list of traditionally utilized fish species.

4.4 Fall:

In the past, fall was a make-or-break time for the Upper Nicola Syilx. Gathering and preserving sufficient amounts of foods for winter was of paramount importance and thus many of the spring and summer subsistence activities, such berry picking, root digging, fishing, and hunting continued into the fall with increased intensity. These activities carry on to the present day, although without the direct threat of starvation. UNB members hunt in the same areas their ancestors did,

west of Stump Lake as well as around the Pleasant Valley, Mabel Mountain, Fox Creek, and Fox Lake (James and Oliver 1991: 29-30). Poplar mushrooms and medicinal plants such as rosebush and juniper berries are also harvested when ready in the fall. These food plants are consumed fresh for “a good eat” as well as preserved for later consumption.

5 UPPER NICOLA BAND LITERATURE REVIEW

Previously documented information specific to the TUS Local Study Area (LSA), as defined in Section 6.7, is limited, but there are a number of sources that do provide cultural, historical, traditional ecological knowledge (TEK) and/or Traditional Use information that is relevant to the UNB and their territory.

The majority of previously documented information can be found in ethnographic publications that pertain to the Interior Salish linguistic group. While UNB identifies linguistically and politically as Syilx (Okanagan), given the close prolixity of the Upper Nicola to the Nlaka'pamux (Thompson) and Secwepemc (Shuswap), and history of treaty-making (Fish Lake Accord) and enduring relationships with these groups, the ethnographic literature of all these groups have relevance to the UNB. There is also ethnographic literature pertaining to the "sleeping language" (a language that currently has no fluent speakers) of the Nicola Athapaskan (Stuwix) who had a historical presence in the Nicola Lake area.

As Manuel and Jorgesen (2010) write regarding this history:

> The Nicola Valley has always been an important hub for the Syilx (Okanagan) and Nlaka'pamux (Thompson) peoples and their Secwepemc (Shuswap) neighbours to the north. In addition to these Interior Salish groups, there was also a recorded Athabaskan (Stuwix) presence (Teit 1900).
>
> According to archaeologists and linguists, the widespread and relatively continuous geographic distribution of Salish languages indicates considerable antiquity for Salish people in British Columbia and Washington State (e.g. Suttles and Elmendorf 1963; Jorgensen 1969; Sanger 1970), but the Stuwix presence in the Nicola Valley is harder to evaluate. It is generally agreed that by the end of the 19th century, Nicola Valley Athabaskan populations had been assimilated into Syilx or Nlaka'pamux communities, either through intermarriage or adoption, and further eroded by warfare with the Secwepemc (Dawson in Kennedy and Bouchard 1987; Smith 1900; Teit 1900; Teit 1930, as cited by Manuel and Jorgesen 2010:4).

There are a number of technical reports produced by anthropologists and consultants that deal locally with the Upper Nicola Band. These include the work Golder Associates (2008) conducted for the BC Hydro ILM project, Bethell Management Ltd. (1998) conducted for the Coquihalla Highway Phase III

development, as well as two Master's theses. Elina Hill's (2012) thesis engages with the issue of indigenous knowledge practices and Emma Feltes' (2011) research explores the present day meanings of the to Memorial to Sir Wilfrid Laurier. In addition, the *Spahomin Archaeological Inventory Project: Phase One* (James and Oliver 1991), conducted through the British Columbia Heritage Conservation Branch, provides a rich description of UNB-specific ethnography and oral history and archaeological site assessments. This report provides a description of the existing archaeological and ethnographic records of the UNB as well as presenting oral histories that include information of site locations, seasonal subsistence resources and processing, and land use patterns. These core resources form the background of research for UNB, and, along with ethnographic accounts of the Syilx (Teit and Boas 1900; Teit 1930; Kennedy and Bouchard 1998), it is possible to form a unique picture of Upper Nicola Band identity and place among the larger linguistic groups in the area.

The information review includes the following:

- Ethnographic and Ethno-historical literature (Section 5.1), and
- Heritage Overview Assessment, Social and Environmental Impact Assessment, and Archaeological Inventory Project (Section 5.2).

5.1 Ethnographic and Ethno-historical Literature

While there are few primary ethnographic sources specific to the UNB, numerous ethnographic and historic publications discuss the larger cultural context of the Interior Salish Peoples and Syilx. Rather than provide a comprehensive review, the aim of this section is to highlight key ethno-historical sources relevant to the Upper Nicola Band.

Some early historical descriptions of the Interior Salish include the journals of George M. Dawson's 1875-1878 survey of the central and southern regions of the interior of the province (Dawson 1989). Dawson spent a great deal of time in the region of the Fraser and Thompson Rivers. These journals contain observations of the First Nations people he encountered and locations of village sites. Missionaries including Father J.M. LeJeune, OMI, based in Kamloops, wrote extensively on Chinook Jargon in addition to accompanying chiefs Chillihitza of Douglas Lake and Louis of Kamloops in their 1904 journey to England to petition King Edward IV (whom they did not in the end meet), and then on to Rome for an audience with Pope Leo XIII (LeJeune 2011).

There is little ethnographic information available regarding the land use of the Upper Nicola Band specifically. However, James Teit wrote extensively on the neighbouring Nlaka'pamux, whose land use he proposed to be very similar. Teit noted, "The food of the Okanogan (sic) differed little from that of the Thompson. The proportions of the different foods used were about the same, as were the methods of collection" (1930:237). The first ethnographic accounts of the Syilx come from Teit who wrote extensively on the Salish of the Plateau (1930). His work contains valuable data on settlement sites and territories that assist in understanding the historical context of the region.

Charles Hill-Tout was another early ethnologist who wrote about the Interior Salish and the Syilx in particular (Hill-Tout 1978). Further, archaeologist Harlan I. Smith (1900) conducted the first known archaeological research in the region and Elmendorf (1965) recorded linguistic and geographical information about the Northern Plateau area, focusing on the seven different speech communities of the Interior Salish.

The book, *Mourning Dove: A Salishan Autobiography*, written by Christine Quintasket, under the pen name of Mourning Dove, from the Colville Confederated Tribes of Eastern Washington and edited by anthropologist Jay Miller, details information on women's activities, seasonal activities, and Syilx history (Mourning Dove and Miller 1990). This book provides valuable insight into the history of the region from a woman's perspective. Additionally, the books, *Write It on Your Heart: The Epic World of an Okanagan Storyteller* (Robinson and Wickwire 1989), *Nature Power: In the Spirit of an Okanagan Storyteller* (Robinson and Wickwire 1992), and *Living by Stories* (Robinson and Wickwire 2005), present oral narratives by Syilx storyteller Harry Robinson, edited by oral historian Wendy Wickwire.

In a similar vein, the book, *Q'sapi: A History of Okanagan People as Told by Okanagan Families* (Louis 2002) traces the history and genealogy of the Syilx through stories. Containing conversations with Elders and other members of the community, this book shares their personal experiences with respect to their family stories, ancestral lines and family photographs. This book captures the oral tradition of the Syilx by linking these memories through family trees.

The Okanagan Indian Education Resource Society and Okanagan Rights Committee compiled a historical overview of the Okanagan Nation presented in the book, *We Get Our Living Like Milk from the Land* (1993). In this text, edited by Jeannette Armstrong, Greg Young Ing, and Delphine Derickson, the historical overview of the Okanagan Nation begins with the Creation Story, moves through

the early colonial period, and concludes with a discussion of present-day challenges.

Kennedy and Bouchard contributed to the Smithsonian's *Handbook of North American Indians, Vol. 12*. In their chapter Northern Okanagan, Lakes, and Colville (Kennedy and Bouchard 1998:238-252) they provide detailed references to ethnographic and ethnohistorical sources. In addition, anthropologist Douglas Hudson contributed to the textbook, *Native Peoples: The Canadian Experience* with his chapter on The Okanagan (Hudson 2004: 253-376). In this exploration of the social aspects, culture, and history of The Okanagan, Hudson (2004) presents an anthropological overview of the culture-area. Hudson further highlights contemporary challenges Syilx communities face such as resources and land use conflicts, including access to timber, fishing, water, and land.

More recently, Elina Hill wrote a Master's thesis in history at the University of Victoria that investigates Indigenous peoples' oral, social and land-based modes of sharing knowledge. For her research, Hill interviewed five knowledgeable Upper Nicola Band members about their knowledge practices (Hill 2012). Emma Feltes also wrote a Master's thesis in Anthropology at Dalhousie University exploring the ongoing significance of the 1910 *Memorial to Sir Wilfrid Laurier* for the communities who presented the original document (Feltes 2011).

Further historical research can be found in books and articles written by Thompson (1978), Ware (1978), Woolliams (1979), Wickwire (1998), Richard (1999), Harris (2002), and Thoms (2002).

5.2 Heritage Overview Assessment, Social and Environmental Impact Assessment, and Archaeological Inventory Project

In addition to the ethnographic and ethno-historical literature, there is one Heritage Overview Assessment that includes an overview-level Traditional Use Study, completed by Golder Associates, which pertains to Land Use and cultural knowledge of the Upper Nicola Band. There is also a Region-wide Social and Environmental Impact Assessment, completed by Bethell Management Ltd, and an Archaeological Inventory Project, completed by Heritage Resource Consultants Malcolm A. James and Lindsay Oliver under the direction of the UNB, which includes land use information specific to the Upper Nicola Band.

Heritage Overview Assessment

Golder Associates, along with the British Columbia Transmission Corporation, conducted a study concerning the Interior to Lower Mainland (ILM) Transmission

Project in 2008. This broad study sought to identify heritage resources, defined as Traditional Use Sites/Values, archaeological sites, historic sites and paleontological resources within the large (246 km long) Project area. One group interview was conducted with UNB and reported on broad use areas within a narrow LSA for the ILM project.

Social and Environmental Impact Assessment

In addition to the above Heritage Overview Assessment the report*, A Preliminary Overview: Social and Environmental Impact Assessment of the Coquihalla Highway Phase III Development* (Bethell Management Ltd. 1988) also presents a shared focus UNB land uses. This report provides a very broad overview of the region, however it provides little specific information on the ethnographic or ethnohistorical background of the UNB.

Archaeological Inventory Project

Heritage Resource Consultants Malcolm A. James and Lindsay Oliver (1991) conducted an archaeological inventory project directed by the Upper Nicola Band with the assistance of the British Columbia Heritage Trust. This report, *Spahomin Archaeological Inventory Project: Phase One* (James and Oliver 1991) provides a description of the existing archaeological and ethnographic record of the UNB. Oral histories that include information on site location, seasonal subsistence resources and resource processing, and land use patterns are also presented. This phase one report also provides an evaluation of archaeological potential of specific sites in the Upper Nicola River drainage area and proposes excavation strategies and a research design for these sites. For various reasons, phases two and three of this project were not completed.

6 TRADITIONAL USE STUDY RESEARCH METHODS

This section provides a discussion of the objectives of this Traditional Use Study, the history of TUS, the context in which these studies arose, the scale and scope of the present study, and TUS interview methods, including a description of the Traditional Use Categories. Further to this, this section provides a discussion of the information sharing protocol, informed consent, data management and verification processes employed in the present TUS, and the study areas under consideration. The research methods outlined in this section provide the reader with the background information required to understand how the researchers conducted this study and how the research results were attained.

6.1 Objectives

The objectives of this TUS are to:

- Identify Traditional Use Values in the Local Study Area (LSA) and to assist the UNB in assessing the potential effects of the proposed Project on both these Values and the broader Title, Rights, and interests of the UNB. This includes collection of information relating to concerns regarding the development on UNB Traditional Use Values, Title, Rights, and interests.
- Assess potential Project-specific effects and the Project's contribution to cumulative effects on Traditional Use Values, Traditional Use opportunities and on the Aboriginal Rights, Title and interests of the UNB.
- Build capacity within the UNB to conduct their own TUS.

6.2 Traditional Use Studies

TUS or "Use and Occupancy Map Surveys" (UOM), are a form of social science investigation that bring together community knowledge with ethnographic, archival, and sometimes archaeological information to provide clarity on places and values of cultural, economic, heritage or community importance. This is usually accomplished through the recording of oral history and map biographies in interviews with community Elders, knowledgeable land users, Cultural Advisors, and sometimes a larger representative sample of the community.

Land use and occupancy mapping started in the 1970s with a number of First Nations and Inuit organizations preparing for land claims negotiations with the federal government. In the 1990s, in response to the 1993 *Delgamuukw v. British Columbia* court decision, the governments of both Alberta and British Columbia developed "Traditional Use Study Programs." The Delgamuukw decision "directed

the government to determine whether or not specific Aboriginal Rights would potentially be infringed upon by provincially authorized activities such as the issuing of forest licenses or mining and land development permits" (Markey 1996:7). The use of the term "traditional" in TUS is a reference to the Court's understanding of Aboriginal Rights but has been considered problematic by many people. In *Living Proof*, a recent UOM methods textbook, Terry Tobias explains,

> The governments' choice of the word "traditional" when naming their programs was unfortunate, because it inadvertently supports stereotypes… Governments often approach negotiations and litigations with Aboriginal parties from the perspective of traditionalism, which means "the upholding or maintenance of tradition, especially so as to resist change." … [Whereas] "Tradition" is the "transmission of customs or beliefs from generation to generation." The word does not imply cultures are static. Adaptive change is inherent in every tradition. Still, people often mistakenly confuse traditionalism and tradition, to the detriment of Aboriginal peoples. (Tobias 2009:33).

6.3 Scale & Scope of TUS

TUS research methods may be customized to fit the objectives of a particular research process, community or project. They can be categorized as either "Regional" or "Project-specific" and "Overview-level" (Planning-level) or "Operational-level." A Regional TUS is often conducted at a wider scale than a Project-specific TUS, with the study area for the Regional TUS encompassing an entire Area of Interest, geographic region, or geographic extent of a governmental jurisdiction. In contrast, a Project-specific TUS usually has a study area that encompasses a more limited geographic area, such as an area potentially affected by development, a tenure area, or a confined area of importance to a community (such as a village site).

The objective of an Operational-level Project-specific TUS is detailed documentation of Traditional Use sites and Values within the study area, field verification or ground-truthing most significant sites, and often the development of Site-Specific mitigation measures.

Although the objective for this TUS was to follow the methodology for an Operational-level study no ground-truthing was conducted. With very little prior data available and a very large LSA, this study focused on interviewing a greater

number of community members rather than ground-truthing. Twenty-three (23) office-based interviews were completed with eighteen (18) Cultural Advisors. These Advisors were UNB Elders or other knowledgeable land users who were selected by UNB because of their extensive knowledge regarding UNB land use practises. It was noted during the research that a number of UNB Elders who possessed knowledge of the study area had passed away within the past ten to fifteen years. One community workshop was held with interviewed Cultural Advisors and additional community members were invited. The purpose of the workshop was to provide Cultural Advisors with a TUS status update, review and verify that interview information was recorded accurately, and to discuss potential Project effects and concerns.

6.4 TUS Interview Methods

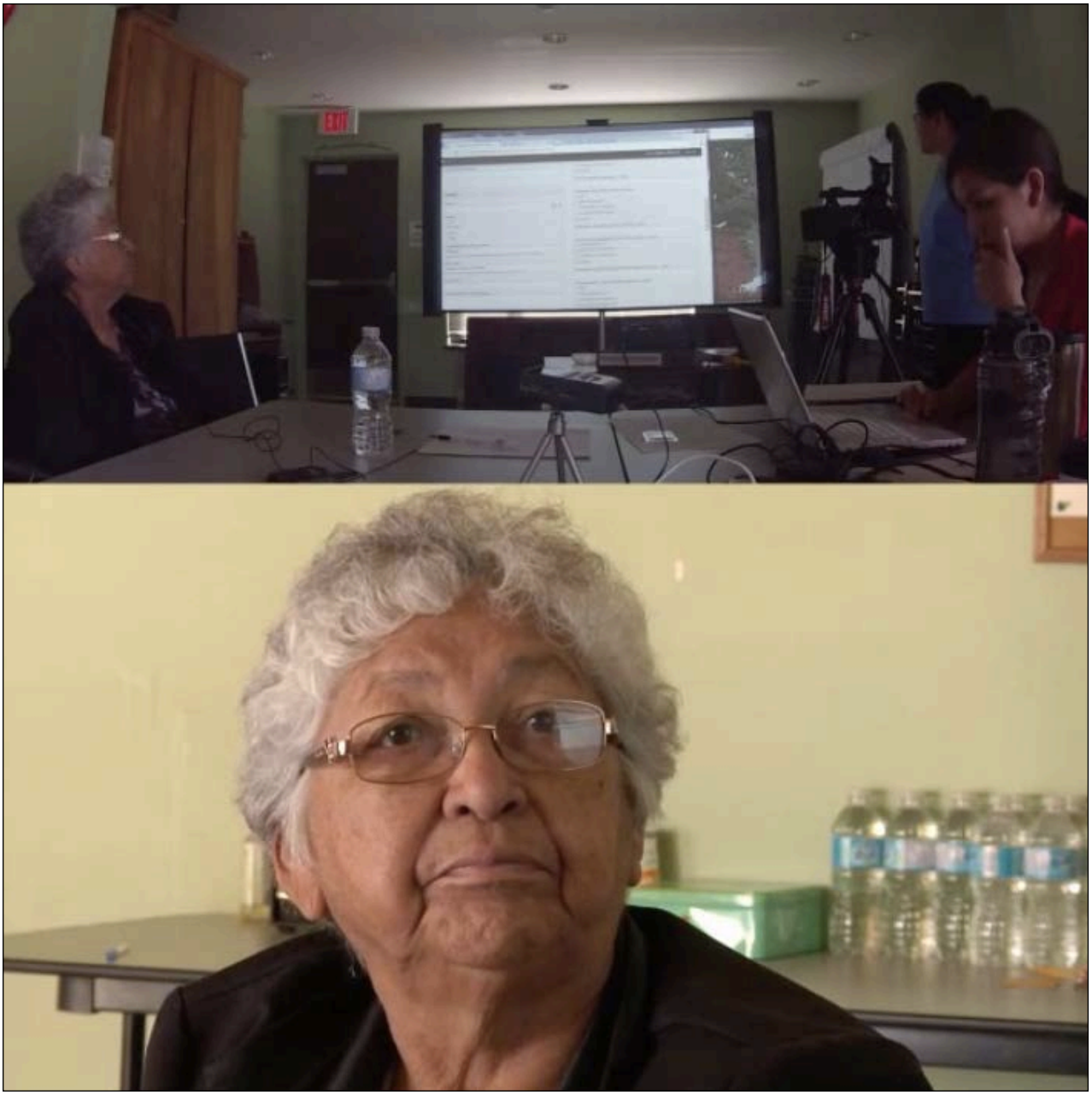
The UNB coordinated and planned the TUS interviews. The interview team consisted of two TUS consultants and three Upper Nicola Band TUS Researchers. Twenty (20) days of interviews were planned with Advisors between April 4, 2014 and May 3, 2014. Interviews ranged from between two hour and seven hours in length, and were conducted indoors. The majority of interviews took place with individual community members, though in a few cases interviews were conducted with groups of two. Mapping was carried using Google Earth software. Audio files (in MP3 format) and video files (in .MP4 and .MOV format) were recorded during each interview, with the interview Advisor's permission. Interviews followed a semi-formal format, following a standardized list of TUS interview questions (see Appendix A) and mapping conventions (see photographs 2,3).

Themes covered during the TUS interviews included past (from start of living memory to 10 years prior to the present), present (within the preceding 10 years), and future (planned future use) 'Traditional Use Values' in seven broad categories. In this context, a *Traditional Use Value* refers to a specific place, resource, or interest reported by a UNB Cultural Advisor, and considered important to the on-going practice of UNB interests and use, including Aboriginal Rights and Title, in the region.

A Site-Specific Traditional Use Value is one that is associated with a unique location mapped through interviews or other means. A Non-Site-Specific Value is one that, while important, was not, or could not be described spatially through mapping. The seven Traditional Use Values categories are defined as:

Table 1 Seven Traditional Use Value Categories

Traditional Use Value Category	Definition
Cultural/ Spiritual Values	Past, Present and Prospective Cultural/Spiritual Values (gathering places, burial places, ceremonial areas, story places, medicinal and sacred plants, teaching areas, etc.).
Habitation Values	Past, Present and Prospective Habitation Values (cabins, camps, village sites, etc.).
Subsistence Values	Past, Present and Prospective Subsistence Values (e.g., procurement of moose, caribou, other game, fur bearers, fish, birds and eggs, berries, food plants, water sources, and locations where specific tasks related to processing these resources took place).
Commercial Values	Past, Present and Prospective Commercial Values (trapping, guiding/outfitting, tourism, timber, etc.).
Critical Wildlife/ Ecological Values	Past, Present and Prospective Critical Wildlife/Ecological Values (mineral licks, special habitats, calving areas, etc.).
Transportation Values	Past, Present and Prospective Transportation Values (trails, water transport corridors, historical migration routes, etc.).
Indigenous Landscape Values	Place names and Indigenous Landscape Values (place names, boundary markers, orientation points, mnemonic Values, etc.).



Photograph 2 Traditional Use interview being conducted in Spaxomin, BC. May 2014

6.5 Information Sharing and Informed Consent

The UNB Community Researchers, prior to collection of the information, reviewed the specific methods for mapping, documentation, and intellectual property rights regarding the information gathered in the study. Kwusen Research & Media Ltd. signed an agreement with the UNB that includes an intellectual property rights clause stating that all Traditional Knowledge and interview recordings will remain the property of the UNB and all interview data is treated as confidential and can

only be released by the UNB. Participation of Cultural Advisors in the TUS was contingent upon a documented indication of informed consent.

6.6 Data Management and Verification

Google Earth software was used during the interviews to map Traditional Use Values as points, wherever possible and appropriate, and as polygons where necessary. Lines were used to indicate trails and transportation corridors. Hand-written field notes and audio and video recordings were kept. The mapping interview protocol was designed to maintain data integrity so that data could be traced to an individual. All recorded land-use information was confirmed with interview Advisors during the interview process. Each mapped location or value was associated with a letter code (or codes), followed by a site sequence number and a TUS identification code indicating the source Advisor.

Upon the completion of each interview, information that was recorded in hand-written interview notes was transferred into a digital format and entered into a secure data-management website and organized according to Site-Specific and non-site specific Traditional Use codes. All of the information collected through the TUS interviews, along with previous TUS data and archival information has been compiled for use and storage in the UNB Community KnowledgeKeeper (CKK). The CKK is a confidential web-based system for data management, mapping, and archiving Traditional Use information. A series of data entry forms allow community researchers to enter Traditional Use data and for the TUS consultants to remotely provide quality control and on-going feedback on data management.

6.7 Study Areas

6.7.1 Local Study Area

The Local Study Area (LSA) is comprised of the Trans Mountain Pipeline Expansion Project Study Corridor[3], and an additional buffer (see Figure 1). The LSA was limited to the extent of the Kinder Morgan Study Corridor that intersects with the Syilx (Okanagan) Territory (the RSA). Although UNB requested detailed spatial data of the Trans Mountain pipeline system, Kinder Morgan provided a Project "Study Corridor" with a width of approximately 150 metres and indicated that the new pipeline would be constructed within this Study Corridor. Without clarification of the location of the proposed new pipeline within this Study

[3]. As provided by Kinder Morgan Canada Inc. April 2, 2014.

Corridor, it is assumed that the pipeline could in places be constructed along the edges of the Study Corridor and as a result requires additional buffering when considering an appropriate LSA to encompass the majority of direct effects on Traditional Use Values. As a result a 500m buffer was added to the Study Corridor based on professional experience of a conservative distance within which Traditional Use Values have the potential to be directly impacted by pipeline construction and operation. If community members can see, smell or hear an industrial development from the location of a Traditional Use Value this will often degrade or destroy the value of the site. For example, 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 Traditional Use Values kilometres from a project footprint. In addition to the 500m buffer along the pipeline corridor, a 1km buffer was added around above-ground pumping stations.

Noise, dust, air quality, odours and personal safety as well as the resultant threats to health can adversely and directly impact the availability, quality of resources, and the experience for Indigenous Land Users exercising Aboriginal Rights. In order to illustrate the estimated impacts of all direct disturbances to pumping stations, a 1km buffer remains a highly conservative buffer distance. A 10 kilometer (km) buffer may be more appropriate for noise (should one want to hunt or practise spiritual or cultural activities without hearing noise from the structure). For big game hunting, British Columbia's provincial hunting regulations require that firearms not be discharged within 100m of any occupied building (Government of BC 2014). The regulations also stipulate that projectiles from a firearm cannot pass along or across a road (Government of BC 2014). Based on high-powered big game hunting rifle ballistics (such as a 30-06 calibre rifle), one cannot safely discharge a rifle while facing a road or structure from a distance of less than 4.8km (SAAMI 2004:7), therefore a 4.8km buffer on both structures (pumping stations, or associated roads) may be more appropriate.

6.7.2 Regional Study Area

The Regional Study Area (RSA) is comprised of the Syilx Territory, which includes the Upper Nicola Band's Area of Responsibility (see Figure 1). As part of the Syilx Nation, the Upper Nicola Band defines as their Traditional Territory the entirety of

the Syilx Territory. This territory extends north to the area of Mica Creek, just north of modern day Revelstoke, B.C., and the eastern boundary extends to between Kaslo and Kootenay Lakes. The southern boundary extends to the vicinity of Wilbur, Washington and the western border of the territory extends into the Nicola Valley. The Territory largely encompasses the extent of UNB Traditional Use Values and from a Traditional Use perspective is understood as the regional context for this TUS. This RSA is specific to UNB and this TUS and differs from those used by Kinder Morgan in their studies for the Project.

Photograph 3 Traditional Use interview being conducted at the Upper Nicola Band Office, Spaxomin, BC. April 2014.

7 TUS RESULTS

The following section provides a discussion of the importance of the Kinder Morgan Tans Mountain Project Area to Upper Nicola Band members, a summary of Site-Specific Traditional Use Values mapped during the TUS interviews, results of the community workshop, and a detailed discussion of Non-Site-Specific Traditional Use Values and community concerns related to the proposed Project. The Site-Specific and Non-Site-Specific Traditional Use Values and the concerns with the proposed Project detailed in this section form the basis for the Traditional Use Assessment in Section 8.

7.1 Importance of the Kinder Morgan Trans Mountain Project Area to UNB Members

As discussed in the Background (Section 3) above, Upper Nicola Band members maintain a strong connection to the traditions and land use practices of their ancestors while also participating fully in the economic opportunities available to them in the region. Spending time on the land, fishing, harvesting plants and animals, and practicing other cultural activities are crucial to their culture and identity as Syilx people. UNB members continue to live by means of a mixed-economy and continue to consume wild meat, fish, plants and berries from the Land.

With the LSA traversing such a great stretch of Syilx Territory within UNB's Area of Responsibility, this covers an area that is of great importance to the UNB. Many members use this area to exercise their Aboriginal Rights to hunt, fish, trap, and harvest plants and animals from the Land. The importance of the area and the need for healthy intact ecosystems in this area that can be used by UNB members was repeatedly expressed in the TUS interviews.

> But don't ever forget that we're here [since] time immemorial. We cannot measure on paper or on our own footprints because we own the whole land . . . And that's what Kinder-Morgan has to know. They don't have to know anything else. They know our ancestor's footprints are there. Our horses are there. Our boats are there. Our medicines are there. They've taken a lot away. But if there's a thread left that means we still exist. We almost got to the point where we're extinct because all of these companies are coming in (ID45).
>
> So, if we were just to sustain our way of life, it gets damaged or impacted, then what do we do? 'Cause we have enough impacts already with fee simple, public utility, now we have the pipeline,

> highways. So we think about it, so when is it going to end? Where is the sustainability of us as a people to maintain us as a people? 'Cause they've eroded so much now that we're at the mercy of industry or government (ID59).

As we will describe in detail below, there are currently 273 documented UNB TU Values that intersect the LSA. This is a strong indication of the importance of the LSA to UNB members in their ongoing practice of Aboriginal Rights and Title.

7.2 Overview of UNB TUS Results

This section of the report provides a summary of the UNB Traditional Use Values recorded, and those that intersect the Local Study Area (LSA). As noted above, we define Traditional Use (TU) Values "specific places, resources, or interests reported by a UNB Cultural Advisor, and considered important to the on-going practice of UNB interests and use, including Aboriginal Rights and Title, in the region".

With interviews covering the Regional Study Area (RSA), there were 779 Site-Specific, and 28 Non-Site-Specific TU Values recorded during the TUS interviews. Of those 779 Site-Specific TU Values, 273 Site-Specific TU Values intersect the Local Study Area (LSA).

This results section includes detailed description of the UNB Site-Specific TU Values documented in this study, followed by a summary of Non-Site-Specific TU Values and UNB concerns, and lastly reports on the results of the community workshop.

Figures 3 and 4 (below) present the TUS Site-Specific data from the current UNB Kinder Morgan Trans Mountain TUS that intersects the LSA. The mapped Site-Specific Traditional Use Values have been buffered to protect confidentiality and to allow for the margin of error in office-based mapping. Where the buffers are based on point data, the center point has also been randomized within the buffer to further protect confidentiality. The intent of the following map figure is to depict the general locations and diversity of Traditional Use Values that are anticipated to be directly affected by the proposed Project.

7.2.1 Summary of Site-Specific TU Values

UNB Cultural Advisors were asked during their interviews to indicate important sites on a Google Earth map projection, including sites used in the past, the

present, and sites intended for planned future use. In total, eighteen (18) Upper Nicola Cultural Advisors were interviewed for the TUS, eleven (11) men and seven (7) women. All sites recorded during the TUS were past and/or presently utilized areas. In many instances Cultural Advisors indicated that they intend to continue to use these sites in the future. In the case of this TUS, none of the sites recorded during this TUS were indicated as only future use– i.e., all sites recorded were sites previously utilized.

Office-based TUS interviews were conducted for relatively short periods of time and cannot produce maps of all the locations of importance to a single UNB land user, let alone the majority of community members who were not interviewed. TUS research results will always be but a small portion of the knowledge, land use practices, and land based Values held by an indigenous community.

Site-Specific TU Values recorded within the LSA are described in general terms below, according to seven categories. The description of sites ascribed to each category below corresponds directly to the categories of sites depicted in map Figures 3 and 4. The mapped TU Values are represented on two separate map figures (Figures 3 and 4) so that the seven TU Value category polygons may be more easily be distinguished than if they were all on a single map. The mapped TU Values cover 100% of the LSA with large overlaps between each category. The coverage of the whole LSA with TU Values and multiple overlaps between categories indicates the great importance, extensive and varied use of the LSA by UNB. 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. For example, rather than mapping multiple deer kill sites, it has been the research team's preference to map an area where a family hunts year after year as a single polygon instead of multiple kill sites. 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 an interview sample size that cannot be considered statistically representative of the whole community. Therefore the number of TU Values indicated below are presented as qualitative data for description purposes only.

Site-Specific Subsistence Values

Cultural Advisors were asked during their interviews to indicate subsistence (hunting, fishing, plant gathering, berry gathering, etc.) activities that they have conducted throughout their Area of Interest and within the LSA. Subsistence sites

were mapped as points when identifying an individual kill site or small gathering area and as polygons when identifying larger areas utilized for a particular subsistence activity. In all cases, the interviewers attempted to establish an accurate record of the location, the type of subsistence activity, the species being harvested, the community members involved, and the timeframe for the activity being recorded.

Through the twenty-three (23) TUS interviews, there were one hundred seventy-four (174) subsistence sites and polygons associated with past and present subsistence activities described in the LSA. Most of the subsistence areas mapped as polygons represent decades of an individual or group subsistence activity carried out in a resource rich area. Site-specific Subsistence Values associated with the LSA include hunting (moose, deer, grouse, elk, bear), fishing (trout), picking berries (huckleberries, soapberries, saskatoon berries, raspberries, blueberries, choke cherries), picking mushrooms (lightning mushrooms, poplar mushrooms), picking food plants (Labrador tea, wild potatoes, wild onions), collecting water, gathering firewood, and collecting tree sap. The combined one hundred seventy-four (174) Subsistence Values represented in Figure 3 have been buffered and represented with a yellow crosshatch pattern.

Site-Specific Transportation Values

Cultural Advisors were asked during their interviews to indicate current and historic Transportation Values (locations of roads, water transportation routes, trails, old wagon roads, footpaths, etc.) in the LSA. Transportation Values are mapped as lines. In all cases, the interviewers attempted to establish an accurate record of the location, the type of Transportation Value observed, and the time period of use.

Through the twenty-three (23) TUS interviews, there were seven (7) Transportation Values associated with past and present subsistence activities described in the LSA. Transportation Values represented in Figure 3 have been buffered and are represented with a green crosshatch pattern.

Site-Specific Critical Wildlife/Ecological Values

Cultural Advisors were asked during their interviews to indicate current and historic Critical Wildlife/Ecological Values (locations of fish spawning areas, calving grounds, nesting sites, mineral licks, etc.) in the LSA. Critical Wildlife/Ecological Values were mapped as points when possible and as small polygons when the precise location could not be identified in the interview setting. In all cases, the interviewers attempted to establish an accurate record of the

location, the type of Critical Wildlife/Ecological Value observed, and the time period of observance.

Through the twenty-three (23) TUS interviews, there were three (3) Critical Wildlife/Ecological Values associated with past and present subsistence activities described in the LSA. Critical Wildlife/Ecological Values represented in Figure 3 have been buffered and are represented with a red crosshatch pattern.

Site-Specific Habitation Values

Cultural Advisors were asked during their interviews to indicate Habitation Values (locations of cabins, camps, etc.) in the LSA. Habitation Values were mapped as points when possible and as small polygons when the precise location could not be identified in the interview setting. In all cases, the interviewers attempted to establish an accurate record of the location, the type of habitation, the time period of use, year of construction, and the community members who built or used the habitation.

Through the twenty-three (23) TUS interviews, there were thirty-two (32) Habitation Values associated with past and present habitation activities described in the LSA. Habitation Values represented in Figure 4 have been buffered and are represented with a pink crosshatch pattern.

Site-Specific Cultural/Spiritual Values

Cultural Advisors were asked during their interviews to indicate areas of cultural or spiritual value including burial sites, ceremonial areas, medicinal plant gathering areas, and gathering places that occur within the LSA. As Cultural/Spiritual Values are often considered to be unique sites of critical importance for spiritual or cultural reasons, interviewers attempted to establish an accurate record of the location, the reason for the area's importance, the community members or ancestors involved, and the timeframe for stories, activities, and burials.

Through the twenty-three (23) TUS interviews, there were forty-one (41) Site-Specific Cultural/Spiritual Values described within the LSA. The Cultural/Spiritual Value represented in Figure 4 has been buffered and represented with a red crosshatch pattern.

Site-Specific Indigenous Landscape Values

Indigenous Landscape Values refer to Indigenous language place names or knowledge about significant geographic or spatial features. Over lifetimes spent on the land, the importance of specific locations is solidified through the act of

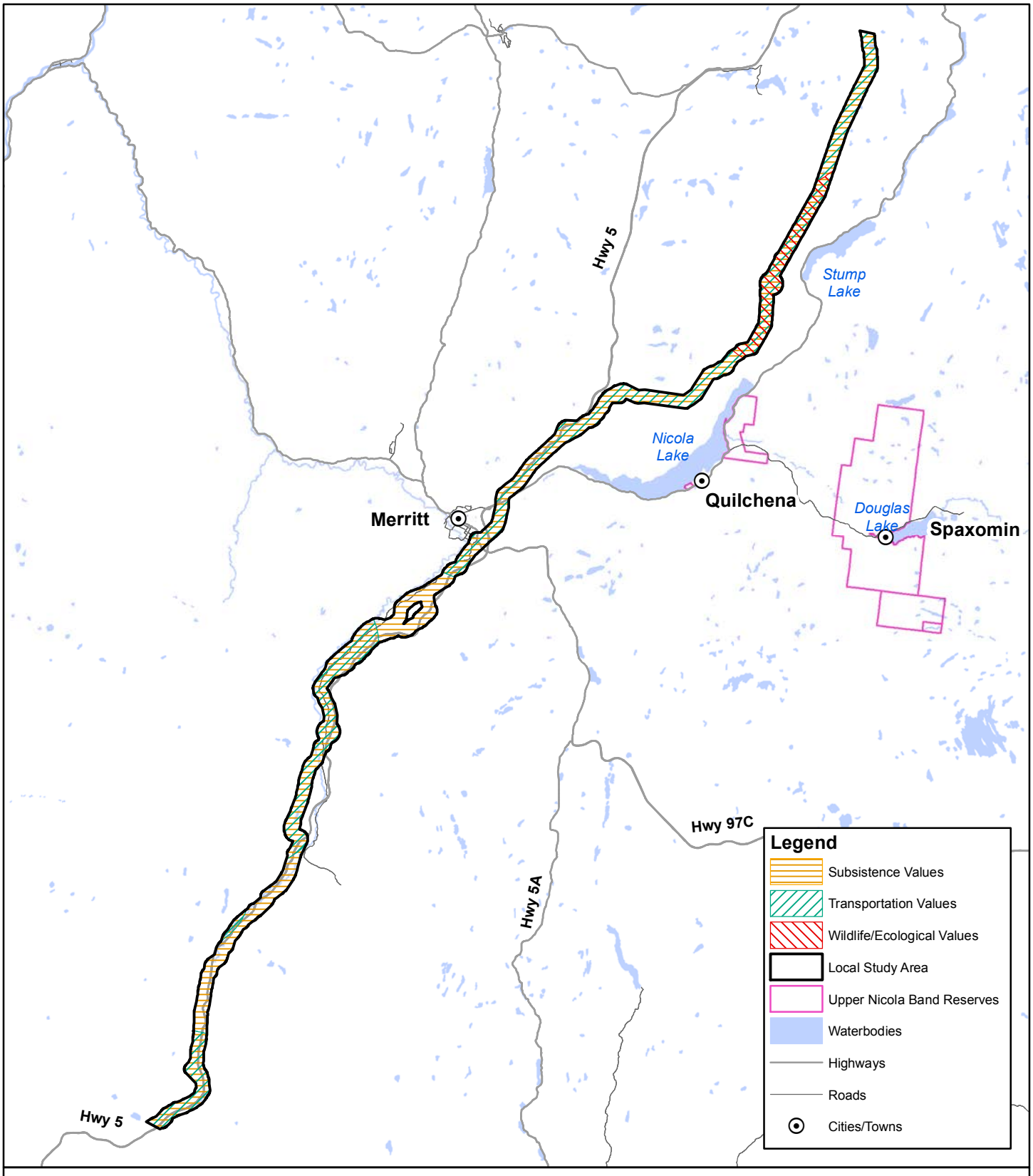
giving names to places and geographic features. These names represent layers of cultural and historical knowledge and memory tied to the land. Place names are evidence of long-term occupancy of the land by the UNB.

Cultural Advisors identified twelve (12) Indigenous Landscape Values within the LSA. Indigenous Landscape Values represented in Figure 4 have been buffered and are represented with a green crosshatch pattern.

Site-Specific Commercial Values

Interview respondents were asked to indicate current and historical areas in which they conduct commercial activities (commercial trapping, guiding, commercial fishing, etc.) in the LSA. Commercial activities were mapped as points when possible and as small polygons when the precise location could not be identified in the interview setting. In all cases, the interviewers attempted to establish an accurate record of the location, the type of commercial activity, and the time period of use.

There were four (4) Commercial Values recorded during the TLU interviews that intersect with the LSA. These Values are represented in Figure 4, they have been buffered and are represented by a yellow crosshatch pattern. The Commercial Values mapped in Figure 4 primarily consist of sites used for the commercial trapping of fur-bearers.



N

1:470,000

Projection: NAD 83 UTM Zone 12N

Figure 3: Subsistence, Transportation, and Wildlife/Ecological Values Intersecting the Local Study Area

Printing Date: Sep 11 2014

Produced by: CloverPoint Cartographics

For: Kwusen Research & Media

Cultural Data Sources: Upper Nicola Band

Basemap Data Sources: Government of Canada

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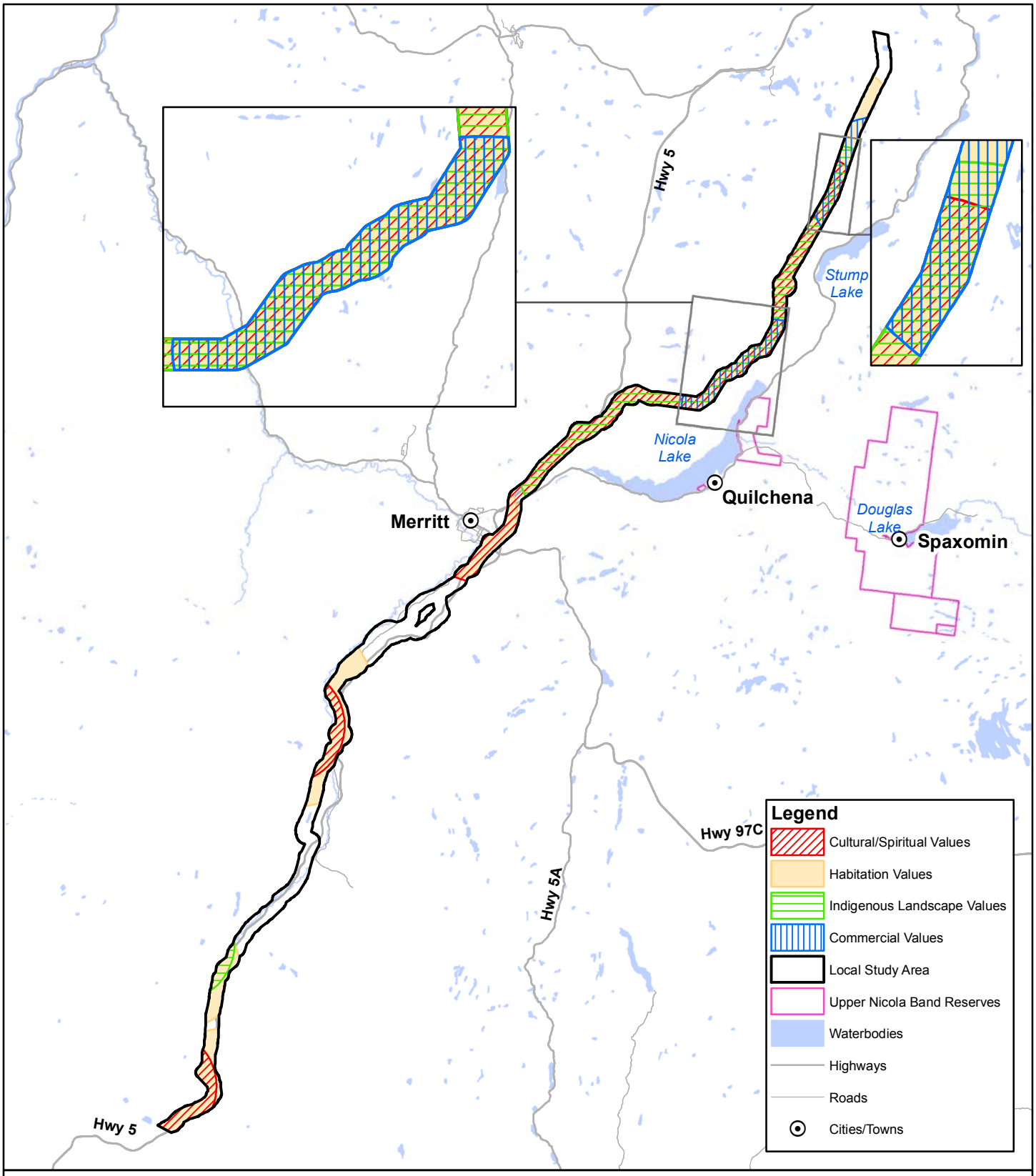
Kwusen Research & Media Ltd.



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Projection: NAD 83 UTM Zone 12N

Kwusen Research & Media Ltd.

Figure 4: Cultural/Spiritual, Habitation, Commercial, and Indigenous Landscape Values Intersecting the Local Study Area

Printing Date: Sep 16 2014

Produced by: CloverPoint Cartographics
For: Kwusen Research & Media
Cultural Data Sources: Upper Nicola Band
Basemap Data Sources: Government of Canada

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7.3 Traditional Use Study Community Workshop Results

On July 23, 2014 a community workshop was held at Upper Nicola Band's Glimpse Lake Camp to review the information recorded during the TUS interviews and discuss project impacts and related concerns.

The community members interviewed between April 3, 2014 and May 30, 2014 were invited to attend, as well as all other interested community members. Workshop announcements were posted in the UNB newsletter inviting UNB members and TUS Advisors. In addition, phone calls were placed to TUS respondents to inform them of the event. Twenty-one (21) community members attended the workshop, in addition to three (3) UNB staff and two (2) Community researchers. Two (2) TUS consultants were also in attendance. The goals of the workshop were to:

- Review maps that contained Site-Specific Traditional Use data;
- Discuss potential impacts on traditional sites and Traditional Use opportunities from the proposed Kinder Morgan Canada. Project; and,
- Identify community concerns related to the impacts of the proposed Project on Traditional Use opportunities, land use, and Aboriginal Rights and Title.

Towagh Behr and Josh Hazelbower facilitated the workshop, and Justine Manuel took handwritten notes. An audio recording of the workshop was made and subsequently transcribed, and digital photographs were also taken. The workshop ended with a community dinner for all participants, and as thanks to the Cultural Advisors for sharing their knowledge. The first half of the workshop focused on reviewing the Project Development Area and development details as proposed by Kinder Morgan Canada as well as reviewing the Site-Specific TUS interview results. Workshop participants had the opportunity to review a map of buffered TUS sites and confidential maps showing detailed un-buffered Traditional Use locations. During the second half of the workshop, community participants discussed their perceptions of impacts to Traditional Use Values and Traditional Use opportunities. An active discussion took place concerning the Project, during which a number of concerns regarding the Project were voiced by Cultural Advisors and other UNB community members. These were recorded on the audio recording and transcribed, as well as captured in the handwritten notes, and written on a flipchart for all the workshop participants to see and review. These concerns are presented in the section below.

7.3.1 Summary of Non-Site-Specific TU Values and Community Concerns with Development

Non-Site-Specific TU Values are those Values associated with traditional activities that were reported in relation to the Project during interviews, but were not easily associated with demarcated locations, or that interview participants were not able to map within the interview setting. Below is a detailed description of issues and concerns that were raised during interviews, but were not mapped.

Of particular importance here, are the perceptions, descriptions, and statements verbalized by study participants during interviews related to UNB culture and TU activities that could not be mapped. This section highlights concerns raised by UNB members related to the significance of having access to an intact and healthy environment and the interconnected values of self-reliance and self-determination, cultural traditions, and cohesion, and the ability to practice and maintain UNB culture.

Upper Nicola Cultural Advisors interviewed for this Traditional Use Study raised many concerns over existing and proposed industrial developments. Their concerns were largely associated with: Construction of the original Trans Mountain Pipeline; Destruction of land due to road building; Loss of access to land and resources; Lack of respect shown for land and Cultural/Spiritual Sites; Herbicides being used on the right-of-way; Deforestation; Oil spills and industrial accidents; Liability/responsibility to heal the land in case of accident; Impacts on UNB traditional culture and ability to sustain way of life; and, Long term effects of building pipelines. During the interviews, and in the workshop, several concerns were frequently emphasized and are summarized below.

The concerns listed below were raised through the TU interviews, and discussed at the community workshop. The community workshop was used to verify the interview data, and ensure that UNB member's concerns are accurately documented. The similarity of concerns raised by multiple UNB members at different events indicates that these concerns are widely held within the community.

Through the twenty-three (23) TU Interviews with eighteen (18) UNB Cultural Advisors, and the community workshop, eleven (11) themes emerged from the Non-Site-Specific TU Values and concerns related to the Project. These were documented, and are expressed as the following concerns:

1. Concerns with the construction of the original Trans Mountain Pipeline, including twinning;
2. Project Impacts on watersheds and water crossings, including disturbances on fish, wildlife and birds;
3. Concern over oil spills and industrial accidents;
4. Concern over liability/responsibility to heal the land in case of accident;
5. Concern over culture loss/sustaining way of life;
6. Lack of respect shown for land and Cultural/Spiritual Values;
7. Loss of access to land and resources;
8. Destruction of land due to road building;
9. The herbicides being used on the pipeline right of way;
10. Long term effects of building pipelines; and,
11. Cumulative Impacts of development, including impacts from climate change.

Concern: Concerns with the construction of the original Trans Mountain Pipeline, including twinning

At the community workshop and in interviews, Cultural Advisors repeatedly expressed concern with the construction of the original Trans Mountain Pipeline, completed in 1953, and the complete lack of consultation that occurred then. Only through consultation, mitigation, and accommodation may the effects of the original pipeline construction on the UNB be addressed. There remain major concerns with the loss of Traditional Use areas and the resulting local high magnitude negative effect on traditionally utilized plant and animal species. The lack of consultation prior to the construction of this pipeline on Syilx Territory within UNB's Area of Responsibility has contributed to the sense of loss, disrespect and powerlessness rooted in the ongoing processes of colonization.

> They never talked to us about that first [Trans Mountain] pipeline they put in there, they just went ahead and done it (ID67).

> The first one we didn't really have a say, they just put it in. So far [we've] been lucky, [but] they have leaks here and there and it's that old. What's going to happen when they disturb and put the other pipeline in? (ID59).

Concern: Project impacts on watersheds and water crossings, including disturbances on fish, wildlife and birds

The potential for impacts to bodies of water and watersheds as a result of Project-related spills or leaks was a concern frequently expressed by Cultural Advisors during the workshop and interviews. UNB members have a great deal of fear and uncertainty regarding the product (bitumen) that will be shipped in the proposed expanded pipeline and how a spill of leak will effect water and the wildlife, including birds and fish, that relay on these ecosystems. Cultural Advisors further expressed concern regarding the current level of pollution in the water system. There is fear that additional Project-related impacts to these bodies of water, including disturbances to fish, birds, and wildlife will cause further damage to these already fragile environments.

> Now the other part that we're concerned about it, is certainly, what product are they putting through that pipeline? There's different products. Bitumen is one of them. And I understand that, basically, bitumen it doesn't float like oil. It sinks. It . . . [sinks] to the bottom of the water. (ID59).

> As it is Nicola Lake is getting contaminated. I heard last year that the fish had worms in it. Nobody could eat it. Where is that pollution coming from? (ID45).

Concern: Oil spills and industrial accidents

Cultural Advisors expressed a high concern with the effects of additional pipeline construction and operation on the land and water. Potential oil spills and other accidents such as fires or explosions are considerable fears that were expressed in both interviews and the community workshop. Uncertainty regarding the age and stability of the original Trans Mountain pipeline and the increased likelihood of an accident as a result of the disturbance caused by construction was noted. Oil spills are of particular concern to advisors with regard to how a spill would impact their ability to find clean sources of water while on the land. Concerns about the impacts of an oil spill were also detailed with regard to Nicola Lake.

> And then what about if they do have a major oil spill? You know, see other areas, pretty gruesome. Or if they had a fire, maybe an explosion, one of the, comes out of the ground and goes back in again. What can happen there? (ID59).

> I teach my grandkids the importance of the different things that's happening today like the oil spills and the different prices of water is and how come we got in a bottle and how I used to go pack my water out of the creek. And things like that. You know if you don't respect things it's going to happen the same way. It's not going to be always there. And same with animals. If you don't respect it the way you should (ID56).

> Can it [the pipeline] handle that [dilbit]? 'Cause it has been certainly oil spills already happening up in Coquihalla. I know the Coldwater Indians are pretty concerned about that. Well if you double or twin the pipelines, what's going to happen to the old one? Will you disturb it? That would be the same on the other end, Nicola Lake. How old is that pipeline? 60? 70 years old? (ID59).

Concern: Liability/responsibility to heal the land in case of accident

Cultural Advisors articulated concerns regarding the substance (dilbit) being shipped in the proposed pipeline and the potential impacts of an oil spill. The particular characteristics and uniquely damaging effects of an oil spill containing bitumen was noted with reference to the long-term impacts such an accident

would have on the land and water. The question of liability for this accident and responsibility for healing the land (or even if this would be possible) was raised during interviews and at the community workshop. Planning in advance of an accident and emergency measures in place prior to any further pipeline construction was identified as a concern.

> I guess we're finding that as far as liability the companies are pretty well washed clean of the liability of that . . . So what happens if geological shift or move opens up more cracks in the ground? You know, so there is those kind of, kind of situations that we don't understand. So how do we save? Or do we just take the by gosh by golly approach? Or do we put in some strategic mitigating policy? . . . So that kind of situation gets questioned here, who is responsible if anything happens? And the long term effect (ID59).

Concern: Culture loss/ Difficulty sustaining way of life

The ability to continue to practice a traditional way of life and maintain a connection with ancestors through the Land and land use is a great concern of UNB Cultural Advisors. Members expressed concern the regarding impacts the pipeline expansion will have on their ability to practice their traditions and thus their survival as a people.

> And that's our biggest concern is our survival. Kinder Morgan might have everything but we have our selves. And I think that's really good cause we sit here where our ancestors fished and come and hide away from the mosquitoes (ID45).

> Certainly [the pipeline is] going to have [an] impact on our traditional ways of living. But what if something major happened especially with the old one. So there's some areas that we need to, to have a deeper understanding. So we can say a qualified yes or a no (ID59).

Concern: Lack of respect shown for land and Cultural/Spiritual Sites

There is a widely held desire for UNB cultural protocols and processes, the ceremonies, stories, and language addressing the respectful approach to the Land, to be recognized and integrated into the regulatory and consultation process. In addition to having knowledge regarding ecosystem and environmental management, and water drainage systems, Cultural Advisors also expressed fear if respectful relationships with the land and with one another are not maintained.

> I appreciate all of the concerns that have been brought forward. And I think probably the more concerns we hear that'll probably give us more confidence discussing some of the issues. And probably the problem that I'm having is the fact that we have our own traditional processes—protocols as you might call them when we deal with—there's certain—we have to know the language, the stories, and the ceremonies to deal with that. But when we turn to Kinder Morgan we're not integrating those kind of concepts within their processes so we're kind of cranky at them like I am cranky at Kinder Morgan because they don't understand us. So how do we do that? . . . So how do we take principles like ecosystem management, water drainage systems, environmental management . . . or access to our land, land use . . . How do we take that and take the Nsyilxən language and put them together so that we can make our life sustainable? As far as working with Kinder Morgan? That's what we want to do but we haven't decided that yet. The people here will be doing that deciding (ID59).
>
> Across [Nicola] Lake . . . they used to have sweathouses there because of the legend of the lake itself. Sometimes they would have a sweathouse across the lake before they'd go up in the mountains because that mountain has the legend on it.
> . . . [T]he lake looks after itself. You don't fool around with that lake. Not even when you're passing through. You don't ever disrespect that lake because it'll get back at you. That lake is really, really . . . you got to be careful. Not too many people talk about it because they think it's taboo. But myself, I talk about it because I think that you really need to respect it and Kinder Morgan is not respecting it. Either we're going to get hurt or they're going to get hurt. (ID45).

Concern: Loss of access to land and resources

Cultural Advisors find it difficult to access Traditional Use areas along the pipeline corridor, especially for hunting and berry harvesting. The loss of access was expressed both for past and present uses, as well was uncertainty about potential restrictions to access in the future. Concerns regarding the danger of using a firearm near an active pipeline and the safety of appropriate distances for hunting around the pipeline corridor were raised by members. Cultural advisors are observing changes in wildlife populations as a result of the previous pipeline construction and fear further pipeline construction will further limit the movement and health of wildlife.

> Are you concerned any part of this? Because we hunted that. All this area too. But all this part is all our hunting grounds too. But down in the pipeline area that's going to be—that's our hunting—my hunting ground. For Forty years (ID56).
>
> Right now the Coquihalla, puts it a 1000 m on each side, no fire arms. So right through our hunting country. So we have to be careful when we go up there hunting. Watch for the imaginary 1000 m line, or 300 m line or whatever it is. So that would be, if it's any concern it would be full access. You know along there, along the corridor (ID59).
>
> And up to the [original] pipeline and follow it then we necessarily follow the pipeline, I mean you have to remember that was fairly used in those areas for grazing and stuff, so there's gates and fences put up . . . And uh, there's lots of game, moose and stuff back in there . . . Then in them days. Now that corridor's been sort of closed off after the highway and then there [is] . . . wildlife fencing (ID67).
>
> This side of the-the pipeline the moose are getting smaller . . . Yeah . . . inbreeding and you know . . . Family, you know (ID67).
>
> …[D]own that way [Coquihalla Highway, Coldwater Road, Tulameen Road, Juliet Creek Road] will be huckleberries. Access to the huckleberry country . . . Yeah, all of a sudden they might say [to us], "Well you can't cross the pipeline." Now there's roads over them so you can access [berry picking areas through] the side roads. But there might come a time, "Well we don't want anyone crossing these." Or they'll say that, "There's a corridor of thousand meters on each side, we don't want anybody [going in there]…" Could be a favourite [berry picking] spot of my Auntie's or my good Wife, or my next-door neighbour (ID59).

Concern: Destruction of land due to road building

UNB members experience the loss of Traditional Use practices as a result of road construction. The destruction of land resulting from the creation of roads impacts hunting areas and access to backcountry areas formerly accessible by trails or on horseback.

> Well Fox Lake is close by. Above that – when that pipeline goes in that road, and Fox Lake is above it. All this terrain here? We used to hunt on both sides of that. Because there was a road way through that pipeline that made so we—'cause we used to hunt this part all the way to the Nicola Lake. All that area—see? We hunted right from Nicola itself. Before there was even road built in there we used to hunt all that. This way. All the way. To wherever. In that back country. In there. That's Fox Lake there. So that pipeline comes across in through there—somewhere. Cuts in there and then it cuts across the creek up here somewhere. And then it crosses up and through 101 Ranch. Right here. And it cuts through the open and then it cuts back up towards that area (ID56).

Concern: Herbicides being used on the pipeline right-of-way

Contamination of food plants along the pipeline right-of-way as a result of herbicide use is concern. In the past, forestry's use of herbicides has been an issue and the same concern is present for the pipeline right-of-way.

> That's certainly is a concern [herbicide use on pipeline right-of-way]. I know we jumped up and down when the forestry is using herbicides, or whatever it is, to spray off the bad trees. We [complained] about that. Because that will, up in the high areas . . .we have the Indian tea and the berries (ID59).

Concern: Long term effects of building pipelines

UNB Cultural Advisors expressed concern regarding the lack of information provided on the pipeline, both the existing pipeline and the proposed expansion. Members want to be meaningfully consulted and informed of the details of the pipeline. These details include the materials used, the lifespan, and how operation of the pipeline impacts the land, water, and wildlife.

> And that's what we're afraid of. I'm afraid of that pipeline because it can get so hot. You hear stories [from] the Coldwater Band because the ice melts on that water because of those pipelines (ID45).

> Yeah, so there's pipeline technology that we haven't had a chance to examine. I've done some reading through the National Energy Board. But it doesn't give much information about what can be done or what can be prevented. Or what's the make up of the steel that they

> use? Does it have a lifetime like the old ones? Does it have a lifetime, is it coming to the end of its life now? Do they leave it in the ground or do they take it out when the lifespan is finished? So they're still disturbing the land (ID59).

Concern: Cumulative Impacts of development, including impacts from climate change

UNB members experience environmental impacts and changes to the landscape resulting from industrial development such as the privatization of land for ranching and the creation of utility corridors and highways in a cumulative fashion and not on a project-by-project basis. Cultural Advisors expressed great concern with regard to their decreased ability to access the Land for Traditional Use activities and fear about the safety of consuming wild foods. Pollution from roads and water contamination affects the taste and texture of plants and fish and limits the harvesting and use of these foods and medicines.

> So, if we were just to sustain our way of life, it gets damaged or impacted, then what do we do? 'Cause we have enough impacts already with fee simple, public utility, now we have the pipeline, highways. So we think about it, so when is it going to end? Where is the sustainability of us as a people to maintain us as a people. 'Cause they've eroded so much now that we're at the mercy of industry or government (ID59.)

> Well, the people used to use that for our territory, we used to fight to not have the roads in. We used to use that for everything. Fresh berry picking, fresh saskatoons and sx^{w}úsm, that was a real prime area along there, and they put the road in and knocked all the trees down. And when you start knocking one area down, the other areas get poor. They seem to die. When you disturb one area, you are killing everything. And that's really sad. So that, right where that is, because they used to go further than that, a long time ago they went all over. Because that's where the Shuswaps and the Thompson and Okanagan fought, in those territories. Because that is our land, that's your land, that's our lake, that's ours. [laughter] So you'd fight about it, that's the whole area. Where I'm talking about is where my Dad used to go, but a long time ago, they used to own everything. Everything, where they went, and walked, and rode. So all the roads come in and destroyed a lot of land and a lot of resources. It's kind of tough to travel that Coquihalla because I can imagine all the

> things that the people used to do there. Now you don't pick berries along the road because they're all contaminated with all the stuff they put on the road in the winter, so you don't go around there. And the dust flies in the air and pollutes everything. And the fishing areas are not too good because of pollution too. When they fish Nicola Lake [and] a couple of lakes, they were just filled with worms inside because you can't eat that, and the water was turning pink in the inlet by the reserve, because they didn't know if it was sewer, he didn't know if it was boats or what was in it, or was it some kind of mineral (ID45).
>
> You can't even drink the water now. We used to drink water anywhere. Anytime. Not anymore. You get sick . . . Well the fish don't taste the way they used to taste. A lot of flavour in the fish. You see a lot of colour in the fish. But now it's faded. Like, Janice said, "I'll never eat that fish. It tastes too muddy." Eat garbage (ID61).

In addition to those detailed above, at the community workshop, Cultural Advisors also expressed a number of other concerns. Some of these concerns, including the cumulative effects of development, impacts of road construction, and the importance of integrating UNB cultural processes and protocols into the work of consultation echo and reiterate those previously described.

The additional concerns raised in the community workshop and by UNB leadership cover 38 general themes. These concerns are:

1. The cumulative effects of development. Both the direct and indirect impacts of developments and the continuing alienation of Syilx Territory is a critical concern to the membership;
2. There is a great deal on concern regarding the twinning of the existing pipeline, including reactivating old segments. Pipelines are only as robust as the weakest segment and therefore a risk assessment of the existing pipeline must be conducted to understand the nature of risks, including the risk of accidents and malfunctions of the existing and proposed Trans Mountain pipelines;
3. Reiterating the concern expressed by Cultural Advisors, UNB leadership and workshop participants also conveyed the potential for serious harm to fish, wildlife, groundwater and surface water related to construction. These potentially damaging activities include clearing, blasting, grading, trenching, drilling, boring, seismic surveys, road construction, stream crossings, and water extraction;

4. With regard to the construction and operations phases of the Project, UNB members and leadership expressed a number of concerns. In particular, these concerns relate the riparian clearing along the Right-of-Way, in-stream habitat alterations during construction, and identifying the appropriate windows of least risk for in-stream works. Best practices need to be employed against avoidable risks, and the impacts on the watershed, including Coldwater River, Nicola Lake, and Stump Lake. There are four (4) proposed crossings of the Coldwater River and numerous crossings of both fish-bearing and non-fish-bearing tributaries;
5. There was additional concern expressed by UNB members and leadership regarding the impacts from the construction and operation of the Kingsvale pumping station and the Kingsvale power line. This proposed power line stretches through three (3) different watersheds (Lower Nicola River, Nicola River, and Similkameen Rivers), including twenty-three (23) potential wetland crossings. There is a great deal of concern related to the effects of linear disturbance on the behaviour and fitness of wildlife and birds;
6. There is a widely held concern related to acid rock drainage and metal leaching from the pipeline itself. Upper Nicola Band needs confirmation of the measures that will be used to monitor, avoid, and detect these damaging processes;
7. In addition, there is great concern related to the insufficient assessment of climate change within Kinder Morgan's NEB application. This insufficiency will undermine the risks and necessary risk management;
8. In a similar way to the insufficient assessment of the impacts of climate change, impacts of the Mountain Pine Beetle to the land and watershed have not been sufficiently addressed by Kinder Morgan. There have been significant changes in the Nicola watershed over the last decade and these changes must be carefully considered to avoid increased risks to water and the land. These risks include landslides, water quality and quantity, and risk of forest fires, among others;
9. There is a need for more information on how leaks would be detected within Upper Nicola Territory, as well as how soon (based on spill scenarios provided by Kinder Morgan) extensive oiling of water-bodies throughout the Territory could occur;
10. Further, UNB members and leadership expressed the need for proper notification of oil spills and Project-related accidents. There is a desire for Kinder Morgan to provide UNB with notification of spill and accidents, as well as to provide reports concerning these events and take further actions to mitigate damages;
11. UNB members and leadership expressed concern regarding the insufficiency of information on how spilled product would behave in Upper Nicola Territory and how a spill would be contained and then cleaned up. The extent and degree of

effects of a spill depend on many variables, including time of year, weather conditions, topography, species present, and length of time critical habitat are impacted, etc. Members expressed concern regarding the many "unknowns", including toxicity of oil to fish and the entire ecosystem that relies on fish, the ability of Kinder Morgan to clean up a spill, and the impacts on water quality;

12. Further to the above concern regarding the importance of proper notification of spills and accidents, community members expressed concerns related to disaster preparedness. There is great need for a quick response to an oil spill or other accidents along the pipeline. The contamination of the land and groundwater and the long-term impacts of such an event may be decreased with a quick response. A spill clean-up trailer in Merritt would lessen the response time in case of a spill or accident;
13. Additionally, members and leadership have concerns with the insufficiencies of studies on what would happen when the proposed products (i.e. dilbit) mixes with fresh water. Further to this, there is concern that Kinder Morgan is underestimating the uncertainties and risks, including the health effects of a spill, both for humans and species within the ecosystems;
14. There is also a great deal of concern regarding the length of time required for recovery and the NEB assumption that ecosystems will, in fact, recover in the event of a spill. There is no clear evidence from spills around the world that that these products will naturally biodegrade. This could mean that they remain an on going source of toxic pollution within the water systems. This type of pollution would be very significant to ecosystems within Upper Nicola Territory and impact the ability of the land to heal;
15. Additional concerns expressed by members and leadership are related to oil spill remediation methods. These methods, for example, the cleaning and removal of contaminated sediments, can cause damage to fish habitat and possibly further have damaging effects on fish;
16. Given the great concern regarding the impacts of a potential spill or accident, there is a need for an Operations and Maintenance Office to be located in Merritt. An office located in Merritt would enable a faster response-time in the event of a spill or accident in UNB territory;
17. Changing government policies, as summarized in the statement that, "when governments change, policies change". The lack of a long-term planning process with regard to environmental monitoring and the cumulative impacts of development was a concern shared by UNB Cultural Advisors, workshop participants, and leadership;

18. The differing standards between federal and provincial governments and First Nations with regard to the prevention and mitigation of impacts is a concern expressed by workshop participants. This concern speaks to the difference between UNB cultural protocols and governance practices and the policies and standards of the federal and provincial governments;
19. Cultural Advisors and workshop participants expressed concerns with the existing consultation and environmental assessment processes. There is a strong desire for the integration of UNB cultural protocols, especially as they relate to ecosystem management, watershed management, environmental management, access and/or easement for Kinder Morgan and government, as well as Syilx Land Use management, into these processes. As they are presently, the consultation and environmental assessment processes lack meaningful input, contribution from First Nations, and accommodation;
20. Similar to above concerns regarding the lack of a role for UNB within the current consultation and environmental assessment processes, there is a widely held desire for a fair share of revenue from resources that pass through UNB Territory. There is a great risk involved to the people, land, water and wildlife because of the pipeline operation and UNB members expressed that they are not fairly compensated for this risk;
21. UNB Cultural Advisors strongly expressed a need for the entire proposed pipeline route to be walked and precise GPS locations to be recorded of all of the TU Values. This desire for ground-truthing sites includes the locations of Subsistence Values such as food plants, as well as Cultural/Spiritual Values such as medicinal plants;
22. UNB members expressed concern with Kinder Morgan's practice of hiring outside consultants to work on the Project who are not familiar with British Columbia, the people, or the Land. Kinder Morgan has engaged with consultants primarily from pipeline, powerline, and oil and gas industries. This Calgary-based company lacks a working relationship with the Upper Nicola Band;
23. Workshop participants articulated that Spiritual Places such as coming of age sites were not recorded in the TUS interviews. Knowledge about these sites can be restricted and a formal interview setting may not be the proper place to discuss the locations of these sites and activities carried out in these places. As a result, it is not possible to say how many of these important Cultural/Spiritual Traditional Use Value locations are missing from the Site-Specific TU Value results;
24. Concerns were also expressed regarding the critical importance of solitude in sacred spaces, and the ability to "get away". With increased Project-related

activities, such as construction and maintenance, increased access to formerly secluded areas will impact the quiet required at Spiritual sites;

25. Reiterating a concern expressed by a number of Cultural Advisors during TU interviews, workshop participants articulated a fear that Project-related road construction will result in increased access to areas by outsiders. Not only does the construction of roads directly impact and damage existing and future Traditional Use Values, roads also increase access to areas previously difficult to access and result in an increased competition for resources;
26. Further, UNB members and leadership expressed concern with the potential for serious harm to surface water, groundwater, and wildlife during the decommissioning of the pipeline, roads, and stream crossings;
27. The existing infringements must be dealt with before UNB can contemplate a pipeline expansion. The existing Trans Mountain Pipeline has been in operation since 1953 and there has yet to be compensation for this initial taking and for on going pipeline operation. The loss of Traditional Use Values as a result of the original pipeline construction and the on-going risk of spill or accidents is a widely held concern of UNB members;
28. Upper Nicola Band members expressed a need for a Cumulative Impacts Assessment to be carried out within each impacted watershed. This on-the-ground and geo-spatial analysis will account for all species, both wildlife and vegetation, in order to ascertain a baseline for the areas effected prior to any new potential construction;
29. The introduction of invasive plant species was a concern expressed by workshop participants. Echoing the above concern about road construction and increased access to areas that were formerly difficult to access, increased traffic and activity in relation to initial construction activities and on-going maintenance of the proposed pipeline could introduce new invasive species to the area. Invasive plant species can crowd-out food plants and medicinal plants, as well as impact the availability of resources for wildlife;
30. There is a widely held concern that pipeline construction will disturb human burials and archaeological sites. The locations of these sites are not entirely known and increased activity, construction, and traffic in the area may disturb these culturally sensitive sites;
31. Reiterating a concern detailed above, workshop participants expressed fears regarding the contamination of wild foods as a result of pesticide and herbicide use. There are a significant number of Subsistence Values, including berry and mushroom picking areas within the LSA, as well as medicinal plant gathering

areas. UNB members are concerned that these plants and medicines will be contaminated by potential herbicide use along the pipeline right-of-way;

32. A further concern was expressed regarding the TUS interview methods and the requirement for specific measurements of Traditional Use. This quantification of Traditional Use made at least one Cultural Advisor very uncomfortable. This Advisor noted that UNB cannot "measure on paper our footprints, because we own the land";
33. Workshop participants expressed uncertainty with regard to a number of Project details, the lack of information provided by the Proponent, and the insufficiency of the risk assessment completed by Kinder Morgan. Specific issues of concern are the proposed pipeline design and integrity and details of pipeline operation. The reading of independent technical documents reviewing the proposed Project have made it clear that Kinder Morgan has not considered the risks and effects of seismic movement and change in an appropriate and sufficient manner. This is a very important point that needs to be adequately addressed. There is also fear regarding the potentially even more toxic environmental effects of the types of substances (such as dilbit) that would be shipped in the proposed expansion. The impacts of a pipeline spill or accident involving dilbit was a widely held concern. Along with the concerns regarding the substance to be transported, there is also uncertainty about the volume of product that will be shipped through the expanded pipeline. Both the substance to be shipped and the amount that will be shipped through the expanded pipeline will have a direct effect on the risk of a spill and the potential impacts of a spill;
34. Building on the concern described above, UNB members expressed a great deal of concern that Kinder Morgan's NEB application does not provide an adequate risk and threat assessment and does not provide a level of certainly. This makes it extremely difficult for UNB to understand and assess the potential impacts of the proposed pipeline expansion. Upper Nicola needs independent assessment of the probability of spill, ecological impacts of a spill, and implications of a spill to the Band;
35. Further, there is great concern because there is no clear insurance or protection against risks Upper Nicola would be carrying and who will be truly liable for a spill or accident. No assurance has been provided to Upper Nicola regarding absolute liability to Kinder Morgan for all impacts on the Band and the Territory, including from accidents and the monitoring, mitigating, and compensation in the event of an accident or malfunction;
36. Similarly, members expressed concern with the insufficient assessment of the costs and benefits of the Project to UNB, including the costs from uncertainties;

37. Members and leadership also expressed that the socio economic impacts resulting from disturbances to Traditional Use and resources use with Upper Nicola must be better understood and assessed to understand the costs of the Project. Disruption during construction and afterwards, including avoidance and mitigation measures must be carefully considered; and,
38. There is a widely held position, expressed by UNB members and leadership that the Kinder Morgan Trans Mountain Expansion Project will not be built in their Territory without the informed consent and support of UNB. As demonstrated in the proceeding list of concerns, there are a large number of concerns that must be addressed before UNB could consider supporting this Project.

As all Traditional Use Values depend on having access to an intact and healthy environment, the effect that the original Trans Mountain pipeline has had on the environment also had an effect on Traditional Use Values. Over sixty years after construction it is challenging to determine the effects of the construction and continued operation of the pipeline on the UNB as an environmental assessment was not completed and the original impacts were not assessed. At the time of the original construction, Government failed to meet its duties to consult with UNB and Trans Mountain failed to understand both environmental assessment and the need to consult other First Nation communities. UNB community members have many generations of TEK, and have a depth of understanding of ecological processes, as well as decades of direct observation on the land. They assert they are able to provide extremely knowledgeable comment on the environmental effects of development, and if permitted and constructed, could work more closely with Kinder Morgan in the future to assist in identifying potential environmental impacts, as well as working on environmental management plans and environmental monitoring.

As pointed out by the UNB Cultural Advisors and leadership above, UNB is very concerned about the potential for environmental degradation and risks associated with the construction and operation of the TMEP pipeline. They are also very concerned about the potential effects of the Project related to the adverse impacts on Upper Nicola Band Traditional Use Values and Aboriginal Rights and Title. UNB members already experience the cumulative effects of development on Syilx Territory and access to areas considered safe for the practise of traditional activities are becoming scarce. Further, UNB has not been adequately consulted and compensated for the historical impacts to TU Values and associated knowledge and cultural practises due to the original pipeline construction in 1953.

8 TRADITIONAL USE ASSESSMENT

This assessment of potential Project effects on the Aboriginal Title, Rights, and interests of the UNB is based on an evaluation of the potential effects as identified through community interviews (throughout Section 7), a community workshop (Section 7.3), and concerns raised by the UNB leadership (Section 7.3.1). The Syilx holds Aboriginal Title, Rights, and interests to their Territory. Within this Territory the Upper Nicola Band have a right to continue exercising these rights through, for example, the continuation of their traditional land based practises as exemplified through their Traditional Use Values. A TU 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 interests and use, including Aboriginal Rights and Title. The Project-specific and potential cumulative effects on reported TU Values indicate that the proposed Project will adversely effect these TU Values. This Traditional Use Study provides a broad depiction of the magnitude of these impacts on UNB TU Values and therefore Sylix Aboriginal Title, Rights, and interests.

The following sections provide the assessment methodology and then an assessment of the potential for the proposed Trans Mountain Pipeline Expansion Project to affect Syilx Title, Rights, and interests.

8.1.1 Project-Specific Effects Assessment Approach

The assessment of effects on TU Values is based on the evaluation of the potential effects and unplanned events resulting from the proposed Project. Project effects could occur from the construction and operation of the proposed Project. Unplanned events could include inadvertent, accidental, or secondary disturbances, and may include natural or human caused disasters, operational accidents and spills, and earthquakes.

In our assessment we generally follow the methodological criteria set out by the Canadian Environmental Assessment Agency (CEAA). In particular we consider the following criteria in our assessment of the impact significance on Traditional Use Values:

Direction: Indicates whether an effect is considered positive (a benefit), negative or neutral. Some effects may have both positive and negative (adverse) dimensions.

Geographic extent: In regard to "Geographic Extent" the Federal Environmental Assessment Review Office (FEARO) points out that: "Localized adverse environmental effects may not be significant. Alternatively, widespread effects may be significant. When considering this criterion, it will be important to take into account the extent to which adverse environmental effects caused by the project may occur in areas far removed from it (e.g., acid rain and the long-range transportation of atmospheric pollutants), as well as contribute to any cumulative environmental effects."(FEARO 1994).

We defined Geographic Extent as: The geographic area within which an environmental effect of a defined magnitude occurs (Site-Specific, local, regional).

FEARO further refers to "**Duration" (and Frequency)** as: "Long term and/or frequent adverse environmental effects may be significant. Future adverse environmental effects should also be taken into account. For example, many human cancers associated with exposure to ionizing radiation have long latency periods of up to 30 years. Obviously when considering future adverse environmental effects, the question of their likelihood becomes very important." (FEARO 1994).

FEARO also considers the "Degree to which the Effects are **Reversible or Irreversible**": "Reversible adverse environmental effects may be less significant than adverse environmental effects that are irreversible. In practice, it can be difficult to know whether the adverse environmental effects of a project will be irreversible or not. It will be important to consider any planned decommissioning activities that may influence the degree to which the adverse environmental effects are reversible or irreversible." (FEARO 1994).

We adapt this to our definition of **Duration:** which refers to the length of time over which an impact occurs. In this case, short refers to the construction phase of the Project (under 5 years), medium refers to a period of time that extends beyond the construction phase but less than a human generation (6-20 years), and long refers to the period beyond 20 years. It is noted that many Traditional Use impacts are rated as long-term and are therefore permanent and irreversible, as an effect is likely to permanently change the use and cultural knowledge of an area if effects continue for longer than one generation (20 years).

The CEA Agency provides additional guidance regarding these criteria as follows:
Magnitude of the Impact: "Magnitude refers to the severity of the adverse environmental effects. Minor or inconsequential effects may not be significant. On

the other hand, if the effects are major or catastrophic, the adverse environmental effects will be significant. When using this criterion, it is important to consider the extent to which the project could trigger or contribute to any cumulative environmental effects." (FEARO 1994)

We adapt this to **Magnitude:** This refers to the degree of change that an effect has the potential to produce. Magnitude may be low, medium or high, and is qualitatively assigned based on the value of the affected use and the availability of alternate use locations (thus it is somewhat unavoidable to consider the cumulative nature of effects given the increasing unavailability of alternate Traditional Use areas).

The Canadian Environmental Assessment Agency and FEARO further have a criterion referred to as: **Ecological Context**: "The adverse environmental effects of projects may be significant if they occur in regions that:

1. Have already been adversely effected by human activities; and/or,
2. Are ecologically fragile and have little resilience to impose stresses" (FEARO 1994).

While we do not include this as a separate criterion it should be noted that for the considered region, both points may be present.

Table 2 Criteria for the Assessment of Traditional Use Baseline Conditions

Attributes	Definition
Direction	
Positive	Effect is positive (a benefit)
Neutral	Effect is neutral
Negative	Effect is negative
Magnitude	
High	Major change from local baseline conditions
Medium	Moderate change from local baseline conditions
Low	Minor change from local baseline conditions
Geographic Extent	
Regional	Project effects extend beyond the Local Study Area and are measurable and perceived by stakeholders within the Regional Study Area
Local	In the Local Study Area
Duration	

Attributes	Definition
Long-term/Permanent	Effect continues throughout the life of the Project (>20 years) or longer; for cultural knowledge and practices any duration longer than a generation (20 years) can be considered permanent
Medium-term	Effect continue for less than a generation (<20 years)
Short-term	Effect continues during construction only (<5 years)
Effects Rating	
Significant	Effects are clearly distinguishable, likely to result in strong concern in the community, and substantial changes in the overall use of lands or resources.
Moderate	Effects are not clearly distinguishable, are unlikely to result in strong concern, or will not result in substantial changes in the overall use of lands or resources.
Minor	Only low-level effects are distinguishable
Unknown	Lack of information to enable rating of adverse effect; requires further study

8.2 Standards or Thresholds for Determining Significance

Significance ratings for residual effects on the Aboriginal Title, Rights, and interests of the UNB are as follows:

Significant: Effects are clearly distinguishable, likely to result in strong concern in the community, and substantial changes in the overall Traditional Use.

Not Significant: Effects are not clearly distinguishable, are unlikely to result in strong concern, or will not result in substantial changes in the overall Traditional Use.

8.3 Traditional Use Project Assessment Results

Kinder Morgan proposes to expand its existing Trans Mountain Pipeline (TMPL) system by 93,800 m^3/d (590,000 bbl/d), from 47,690 m^3d (300,000 bbl/d) to 141,500 m^3/d (890,00 bbl/d). If approved, the proposed expansion would comprise Pipeline facilities that complete a twinning of the existing pipeline in Alberta and British Columbia with approximately 981 km of new buried pipeline; new and modified facilities, such as pumping stations and tanks; and, additional tanker loading facilities at the Westridge Marine Terminal in Burnaby, B.C. If built the second pipeline would cut across approximately 130 km of Syilx Territory within UNB's Area of Responsibility and has the potential to effect Syilx Aboriginal Title, Rights, and interests.

Although requested from Kinder Morgan, at the time this report was completed, Kinder Morgan has not provided UNB with spatial data of the actual footprint location where they plan to construct the twinned pipeline. Kinder Morgan has provided spatial data of the "Kinder Morgan Study Corridor", an area of approximately 150 metres wide, and approximately 130 kilometres long (within the RSA), within which Kinder Morgan is considering constructing the pipeline.[4]

The components of the Project that this TUS addresses in its assessment of potential impacts to Upper Nicola Traditional Use Values are:

- New pipeline segments that are within the UNB's Area of Responsibility and the reactivation of old existing segments; and,
- New and modified facilities, including pumping stations and tanks that are within UNB's Area of Responsibility.

[4] Kinder Morgan Study Corridor spatial data provided to UNB April 2014.

Although the standard practice of the authors would be to include associated right-of-ways, access roads, and similar infrastructure, Kinder Morgan provided no details of these ancillary developments. As a result, we are unable to include these developments in the assessment of potential impacts to Upper Nicola Traditional Use Values.

The life span of the Project is unknown; however, given that the old pipeline was built in 1953 and is still in operation, it assumed that the Project lifespan would be in excess of 60 years. The activities and features related to the building of the Project would disturb the land within the directly impacted corridor (LSA) of the Project with additional direct effects on the surrounding environment through: general construction related clearing, blasting, grading, trenching, drilling, boring, road construction, stream crossings, water extraction and noise from the operation of heavy equipment. It is understood that many of these construction related activities would result in permanent habitat alterations. The development of the Project would potentially render much of the Local Study Area (which, in the absence of spills or accidents, is approximately 16,339 hectares of Syilx Territory within UNB's Area of Responsibility) unusable for Traditional Use activities and cultural pursuits. The proposed Project will therefore impact UNB's TU Values - specifically Cultural/Spiritual Values, Habitation Values, Subsistence Values, Commercial Values, Critical Wildlife Ecological Values, Transportation Values, and Indigenous Landscape Values (as summarized in Section 7). This measurement of area of direct effect (the LSA) only considers construction and operation related direct effects from planned Project activities.

UNB has expressed concern that the proposed pipeline expansion will twin an existing 61-year-old pipeline, which could result in construction-related accidental ruptures of this old pipeline. In addition, the proposed second pipeline is planned to carry highly toxic substances such as dilbit, which does not have a well-understood history of ecosystem interaction. There is the potential for the accidental or natural disaster related leakage or rupture of either the existing or new pipeline, which could result in catastrophic effects on Syilx Territory. This assessment takes these potential effects into consideration along with numerous other issues raised by UNB Cultural Advisors, Elders, and Leadership.

If built, the TMEP would affect both Site-Specific and Non-Site-Specific TU Values held by UNB in the LSA. Added to these effects are the potential catastrophic impacts an accident or natural disaster-related leak or spill would have on the areas beyond the LSA. In addition, UNB is concerned that construction-related

activities such as rock blasting and the operation of heavy equipment within close proximity to the old pipeline may lead to the increased risk of leakage or rupture of the old pipeline. The potential Project effects discussed below are drawn from the current UNB TUS research, a community workshop, concerns raised by UNB leadership and the expertise of the report authors.

8.3.1 TMEP Effects on Traditional Use Values

UNB Cultural Advisors interviewed for this TUS mapped 779 Site-Specific, and 28 Non-Site-Specific TU Values in the Regional Study Area (RSA). Of those 779 Site-Specific TU Values, 273 Site-Specific TU Values intersect the Local Study Area (LSA).

The additional impacts of the construction and operation of the proposed TMEP on the Traditional Uses of UNB members when they are already experiencing a multitude of impacts (such as alienation due to private property, Range Permits/leases, Forest Permits/licences, etc., see Sections 3.2 and 3.3 for more detail on this) in their Area of Responsibility, is of great concern to UNB members.

Potential Project-related impacts on, or loss of, Traditional Use Values include but are not limited to:

1. Loss of access to cabins, campsites, trails, water routes, important moose, elk, deer and bear hunting areas, important commercial areas, important berry picking areas, important medicinal plant gathering areas, sacred spiritual sites (Conversely, increased outsider access to the last two could also lead to their loss of sacredness);
2. Project impacts on watersheds and water crossing, including disturbances on fish, wildlife, and birds and the destruction of important animal habitat areas and sites crucial for the overall functioning of the ecosystem in the LSA. This includes the potential destruction of important fish spawning sites, loss of access to, or destruction of trout fishing areas; and,
3. Loss of access to, or destruction of areas important for traditional ceremonies, oral history, and transmission of cultural knowledge.

The Traditional Use Values affected by the construction and operation of the Project (and potentially destroyed in the event of a spill) are connected not only to current consumption of traditional foods and practicing of traditional culture, but also to future Traditional Use opportunities and to the continuation of UNB cultural identity and spiritual practices. Cultural Advisors interviewed for the TUS

thus hold that the LSA is integral to the continued practice of their Aboriginal Rights and Title.

8.3.2 Community Concerns

Through the twenty-three (23) TU Interviews with eighteen (18) UNB Cultural Advisors, and the community workshop, eleven (11) themes emerged from the Non-Site-Specific TU Values and concerns related to the Project. Their concerns were largely associated with:

1. Concerns with the construction of the original Trans Mountain Pipeline, including twinning;
2. Project Impacts on watersheds and water crossings, including disturbances on fish, wildlife and birds;
3. Concern over oil spills and industrial accidents;
4. Concern over liability/responsibility to heal the land in case of accident;
5. Concern over culture loss/sustaining way of life;
6. Lack of respect shown for land and Cultural/Spiritual Values;
7. Loss of access to land and resources;
8. Destruction of land due to road building;
9. The herbicides being used on the pipeline right of way;
10. Long term effects of building pipelines; and,
11. Cumulative Impacts of development, including impacts from climate change.

In addition to these concerns raised at the community workshop, Cultural Advisors also expressed a number of other concerns. The additional concerns raised in the community workshop and by UNB leadership cover 38 themes. These concerns range from the Cumulative Effects of development, to the insufficiency of the assessment of climate change within Kinder Morgan's NEB application, to the potential for serious harm to surface water, groundwater, and wildlife, during the decommissioning of the pipeline, roads, and stream crossings. For a full discussion of these concerns see Section 7.3.1 above.

8.4 Assessment of Project-related Effects

The assessment of impact significance broadly follows the methodology used for Environmental Impact Assessments as described in Section 8.2. Anticipated and potential project effects on both Site-Specific Traditional Use Values and Non-Site-Specific Traditional Use Values are considered in this assessment. Community concerns as they relate to Non-Site-Specific Traditional Use Values and Aboriginal Rights and Title have also been taken into consideration in this assessment based on the information available to date.

Direction = Negative: All Project related effects on UNB Traditional Use Values and Syilx Aboriginal Rights and Title are considered to be negative. While there are some Traditional Use Values that may not be affected by the Project, all determinable Project effects on TU Values are detrimental (or negative).

Geographic Extent = Local & Regional: The majority of, and greatest severity of Project direct effects from construction and operation on Traditional Use Values would be experienced within the Local Study Area. Through disturbances to traditional transportation routes, road construction and resultant increased outside access to UNB's Area of Responsibility and construction related increase in water and overall ecosystems pollution, Project effects will likely also be experienced regionally (at least as far as Cultural Spiritual Values are concerned, and to a lesser extent on the other six categories of Traditional Use Values). However in the case of an accidental or natural disaster-related spill the regional effects on all Traditional Use Values would be catastrophic. The Impacts of a spill into a body of water would be particularly damaging to the Traditional Use Values, fish, plants, wildlife, and ecosystems downstream.

Duration = Long-Term/Permanent: The vast majority of Project-related effects on Traditional Use Values will be long-term and permanent since the pipeline is likely to have a 60-plus year lifespan. Project effects to cultural knowledge, especially traditional knowledge of TU Values in the LSA, that continue for longer than one generation (20 years) are considered permanent and irreversible.

Magnitude = High: Because of the cumulative nature of the development-related impacts to Syilx Territory within UNB's Area of Responsibility and the increasing unavailability of alternate use locations, the current stress to their Non-Site-Specific Traditional Use Values, as well as the importance to UNB of the likely impacted Site-Specific TU Values, Project effects in the absence of spills and accidents would be considered moderate to high. Given the risk of a pipeline spill within UNB Territory and the potential catastrophic effects on many TU Values in case of accidental or natural disaster related spills or ruptures, the magnitude of Project effects is considered high.

The determination of the significance of Project-related effects has been conducted according to the criteria detailed in Section 8.2. These criteria state that Project effects are considered significant if they meet three criteria: (1) are clearly distinguishable; (2) result in substantial changes in the overall use of lands

or resources; and, (3) likely to result in strong concern in the community. At this time, available evidence suggests that, on average the Project-related effects identified in this study are negative, local/regional, long term/permanent, and high in magnitude. Significance of these effects is considered according to these criteria as follows:

1. It is anticipated that Project effects will be clearly distinguishable;
2. Project-related changes to UNB lands or resources of have the potential to be "substantial" due to both the impacts to TU Values and the risk of pipeline leakage or rupture; and,
3. The degree to which the UNB has expressed strong concern about any additional pipeline developments in their Territory, the lack of consultation and consideration regarding the impacts of the already existing pipeline, the potential for catastrophic impacts and community perceptions of likely Project effects result in strong concern in the community.

Particularly in the context of the risk of a catastrophic pipeline spill, insufficient Proponent and Crown mitigation measures, lack of clarity regarding Proponent liability in case of pipeline leak or rupture this assessment of Project-related effects, based on the information available to date, concludes that the Project-related effects on Syilx Aboriginal Title, Rights, and interests held by the Upper Nicola Band will be significant.

9 CONCLUSION

This report is based on twenty-three (23) indoor interviews with Upper Nicola Cultural Advisors and one (1) community workshop. There were 779 Site-Specific Traditional Use Values mapped during the TUS interviews, 273 of which intersect the LSA. These mapped TU Values cover 100% of the LSA. In the context of this TUS, a Traditional Use Value is defined as a specific place, resource, or interest reported by an UNB member that is considered important to the ongoing practise of UNB land use and exercise of Aboriginal Rights and Title.

Of particular concern among the 273 TU Values in the LSA are currently utilized highly valued hunting areas, fishing sites, important fish spawning areas, berry picking areas, medicinal plant gathering areas, sacred sites and sites important for traditional ceremonies. Spending time on the land, fishing, harvesting plants and animals, and practicing other cultural activities are crucial to UNB culture and identity as Syilx people. The proposed TMEP Project is anticipated to impact these UNB TU Values in the LSA and as a result impact Syilx Aboriginal Rights and Title.

UNB members already experience the Cumulative Effects of development on their Territory and access to areas considered safe for the practise of traditional activities are becoming scarce. Further, UNB has not been adequately consulted and compensated for the historical impacts to TU Values and associated knowledge and cultural practises due to the original pipeline construction in 1953.

The proposed Project will cut across approximately 130 km of Syilx Territory and including important ecosystems and watersheds that would be adversely impacted should the Project be approved. Further Project-related effects include noise, reduced access, taking up of land, habitat alteration and the avoidance of the Project area. UNB perceptions of both biophysical contamination and spiritual disruption from the Project will result in UNB members' avoidance of the Project area. As a result the construction and operation of the Project would potentially render much of the LSA, which, in the absence of spills or accidents is approximately 16,339 hectares of Syilx Territory within UNB's Area of Responsibility, unusable.

UNB is highly concerned about the potential accidental or natural disaster-related risk for pipeline ruptures or spills. Should a pipeline spill enter waterways within or upstream of UNB's Area of Responsibility, impacts to UNB TU Values, and Syilx Title, Aboriginal Rights and interests could be catastrophic.

As detailed in Section 8 of the report, the assessment of Project-related effects indicates that Project-related effects are considered negative (adverse), local and to some degree regional, long-term, and of high magnitude. Our assessment results, based on the information available to date, indicate that these Project-related effects would be (1) clearly distinguishable (2) could result in substantial changes in the overall use of lands and resources by UNB members, and (3) have already resulted in strong concern among UNB members. As a result, this assessment of the Project-related effects, based on the information available to date, concludes that the Syilx Aboriginal Title, Rights, and interests held by the Upper Nicola Band will be significant.

10 LIMITATIONS OF THE STUDY

Research for this study was conducted primarily between April and June 2014 with data compilation and reporting completed in the following months. The timeframe within which the research was completed did not fit with the schedules of all UNB members whom we would like to have interviewed and consequently some key Cultural Advisors or knowledge holders were not available to participate in interviews related to the Project.

Even without these time constraints, no TUS is able to document the full breadth and depth of a community's knowledge regarding a project location. This study was designed to provide a reasonable account of Traditional Use Values in the area of the proposed Project given the constraints of community members' availability, research funding, and time.

Photograph 4: Upper Nicola Band's Area of Responsibility, Syilx Territory. © Krista Belle Stewart

11 REFERENCES CITED

Alfred, Taiaike, Theresa McCarthy and Stella Spak. 2006. Anthropological Report. The Effects of Environmental Contamination on the Mohawks of Akwesasne.

Anderson, Kat. 2006. Tending the Wild: Native American Knowledge and the Management of California's Natural Resources Berkley: University of California Press.

Berkes, Fikret (1999) Sacred Ecology: Traditional Ecological Knowledge and Resource Management. Philadelphia: Taylor & Francis.

Bethell Management Ltd. 1988. A Preliminary Overview: Social and Environmental Impact Assessment of the Coquihalla Highway Phase III Development. Brentwood Bay, B.C. Report on file, Upper Nicola Band Aboriginal Interest Project, Spaxomin, B.C.

Boas, Franz. 1924. Vocabulary of the Athapascan Tribe of Nicola Valley, British Columbia. International Journal of American Linguistics 3(1):36-38. doi:10.1086/463747.

Burk, Chris, Lynne Jorgesen, Diana E. French, George Jennings. 2010. AOA Refinement Utilizing Archaeological Trail Information for the Upper Nicola Landscape Unit. Report Prepared for Upper Nicola Band and Nicola Similkameen Innovative Forestry Service.

Canadian Environmental Assessment Act. (s.c. 2012, C 19 s. 52)

Chiefs of the Shuswap, Couteau or Thompson, Okanagan, Lillooet, Stalo or Lower Fraser, Chilcotin, Carrier, and Tahltan Tribes in the Interior of British Columbia.1911. Memorial to the Honourable Frank Oliver, Minister of the Interior, Ottawa. Assembled at Spences Bridge, May 10, 1911.

Dawson, George M. 1989. The Journals of George M. Dawson: British Columbia, 1875-1878. Vol. 6. Cole, Douglas and Bradley Lockner, eds. Vancouver: University of British Columbia Press.

Elmendorf, William W. 1965. Linguistic and Geographic Relations in the Northern Plateau Area. Southwestern Journal of Anthropology 21(1): 63-78.

FEARO. 1994. A Reference Guide for the Canadian Environmental Assessment Act: Determining Whether a Project is Likely to Cause Significant Adverse Environmental Effects. Ottawa, ON.

Feltes, Emma. 2011 "We Will Help Each Other To Be Great and Good": The Memorial to Sir Wilfrid Laurier and Resolving Indigenous-State Relations in Canada. M.A. Thesis, Department of Sociology and Social Anthropology, Dalhousie University.

Galois, R.M.1992. The Indian Rights Association, Native Protest Activity and the "Land Question" in British Columbia, 1903-1916. Native Studies Review 8(2): 1-34.

Golder Associates. 2008 Heritage Overview Assessment Interior to Lower Mainland (ILM) Transmission Project, Nicola to Meridian New 500kV and the 5L41 Upgrade Transmission Line Alternatives. Report prepared for British Columbia Transmission Corporation.

Government of British Columbia (BC). 2014. 2014-2016 Hunting and Trapping Regulations Synopsis. Effective July 1, 2014 To June 30, 2016.

Harris, Douglas. 1995. The Nlha7kapmx Meeting at Lytton, 1879 and the Rule of Law. BC Studies 108: 5-25.

Harris, R. Cole. 2002. Making Native Space: Colonialism, Resistance, and Reserves in British Columbia. Vancouver: UBC Press.

Hill, Elina. 2012. Indigenous Knowledge Practices in British Columbia: A Study in Decolonization. M.A. M.A. Thesis, Department of History, University of Victoria.

Hill-Tout, Charles. 1978. The Salish People. Vol. 1. The Thompson and Okanagan. Ralph Maud, ed. Vancouver, B.C.: Talonbooks.

Indian Residential School Resources. 2014. Kamloops Indian Residential School. Indian Residential School Resources. http://irsr.ca/kamloops-residential-school/

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

Indian Rights Association of B.C. 1910. Indian Declaration, July 16, 1910. Appendix 21 of A Year in the Life of James Teit, 1910. Teit Times 1995(1): 48.

James, A. Malcolm and Lindsay Oliver. 1991. Spahomin Archaeological Inventory Project: Phase One. British Columbia Heritage Conservation Branch Report prepared for Upper Nicola Indian Band, British Columbia Heritage Trust, and British Columbia Heritage Conservation Branch.

Kennedy, Dorothy and Randall T. Bouchard. 1998. Northern Okanagan, Lakes, and Colville. In Handbook of North American Indians, Vol 12: Plateau. William C. Sturtevant and Deward E. Walker, Jr, eds: Pp. 238-252. Washington, DC: Smithsonian Institute.

Kinder Morgan. 2012. Trans Mountain Discussion Guide: Proposed Trans Mountain Expansion Project Public Information Sessions. http://www.transmountain.com/uploads/pages/1353035567 12_11_09_Discussion_Guide.pdf

Kinkade, Dale M., William W. Elmendorf, Bruce Rigsby, and Haruo Aoki. 1998. Languages. In Handbook of North American Indians, Vol 12: Plateau. William C. Sturtevant and Deward E. Walker, Jr, eds: Pp. 49-72. Washington, DC: Smithsonian Institute.

LeBourdais, Sunny. 2009. Tult: Transformation of Energy into Matter. Report Prepared for The Lakes Division of the Secwepemc Nation.

LeJeune, Father Jean-Marie. Transcribed, translated, and annotated by William J. Poser. 2011. How the Shorthand was Introduced Among the Indians. Northwest Journal Of Linguistics 5(3): 1-10.

Lewis, Henry T. and T. Ferguson. 1988. Yards, Corridors, and Mosaics: How to Burn a Boreal Forest. Human Ecology 16(1): 57-77.

Louis, Shirley, 2002. Q'sapi: A History of Okanagan People as Told by Okanagan Families. Penticton: Theytus Books.

Mann, Charles C. 2006. 1491: New Revelations of the Americas Before Columbus. New York: Vintage.

Manuel, Bernadette and Lynne Jorgesen. 2003. The Fish Lake Accord. Report Submitted to Chiefs and Councils of the Upper Nicola and Okanagan Indian Bands.

Manuel, Bernadette and Lynne Jorgesen. 2010. Red Flag Analysis: Ethnohistoric/Cultural Heritage Resources Review. Report submitted to British Columbia, First Nations Tables, Past Mitigation and Compensation with respect to the Existing Interior to Lower Mainland Transmission Line. Upper Nicola Band.

Manuel, Tim. 2009. Proceedings of the Standing Senate Committee on Aboriginal Peoples Issue 15 - Evidence - Morning Meeting. Kelowna, B.C. http://www.parl.gc.ca/Content/SEN/Committee/402/abor/15eva-e.htm?comm_id=1&Language=E&Parl=40&Ses=2

Markey, N. 1996 Data "Gathering Dust": An Analysis of Traditional Use Studies Conducted within Aboriginal Communities in British Columbia. MA Thesis, Department of Sociology and Anthropology Simon Fraser University.

Morrison, R. Bruce and C. Roderick Wilson. 2004. Native Peoples: The Canadian Experience, third edition. Toronto: Oxford University Press.

Mourning Dove and Jay Miller. 1990. Mourning Dove: A Salishan Autobiography. Lincoln: University of Nebraska Press.

Okanagan First Peoples. 2004. History. Okanagan First Peoples. http://www.okanaganfirstpeoples.ca/history.cfm

Okanagan Indian Education Resource Society and Okanagan Rights Committee. 1993. We Get Our Living Like Milk from the Land. Jeannette Armstrong, Greg Young Ing, and Delphine Derickson, eds. Penticton: Theytus Books.

Okanagan Nation Alliance. (n.d.) Okanagan Sockeye Reintroduction. Okanagan Nation Alliance. http://www.turtleisland.org/news/oksalmon.pdf

Richard, George. 1999. When the Ditch Runs Dry: Okanagan Natives, Water Rights, and the Tragedy of No Commons. B.C. Historical News 32(2): 10-17.

Robinson, Harry and Wendy Wickwire. 1989. Write it on Your Heart: The Epic World of an Okanagan Storyteller. Vancouver: Talonbooks/Theytus.

Robinson, Harry and Wendy Wickwire. 1992. Nature Power: In the Spirit of an Okanagan Storyteller. Vancouver: Talonbooks.

Robinson, Harry and Wendy Wickwire. 2005. Living by Stories: A Journey of Landscape and Memory. Vancouver: Talonbooks.

Smith, Harlan I. 1900. Archaeology of the Thompson River Region, British Columbia. American Museum of Natural History, Memoirs II: VI: 401-442.

Sporting Arms and Ammunitions Manufacturers' Institute Inc. (SAAMI). 2004. Sporting Firearms: Safe Handling Considerations and Shipping Guidelines for Interstate Transportation. http://www.saami.org/specifications_and_information/publications/download/SAAMI_ITEM_203-Sporting_Firearms.pdf

Sproat, G.M. 1878. Volume 4/11. Field Minute. Upper Nicola Indians, Nicola and Douglas Lake. September 28, 1878. B.C. Provincial Collection of Minutes of Decision. Joint Indian Reserve Commission. http://jirc.ubcic.bc.ca/sites/jirc.ubcic.bc.ca/files/Volume%204.pdf

Teit, J.A. 1930. The Okanogan. In The Salishan Tribes of the Western Plateau. Franz Boaz, ed. Forty-fifth Annual Report of the Bureau of American Ethnology: 198-294, Washington, D.C.: United States Government Press.

Teit, J.A. and Franz Boas.1900. The Thompson Indians of British Columbia. Publication of the Jesup North Pacific Expedition. Memoir of the American Museum of Natural History, New York.

Thompson, Duane. 1978 Opportunity Lost: A History of Okanagan Indian Reserves in the Colonial Period. Okanagan Historical Society 42: 43-52

The Coalition of Columbia Basin Tribes. 2014. Fish Passage and Reintroduction into the U.S. and Canadian Upper Columbia River. An Interim Joint Paper of the U.S. Columbia Basin Tribe and Canadian First Nations. February 14. http://naiads.files.wordpress.com/2014/02/fish-passage-white-paper-2-14-14.pdf

Thoms, J. M. 2002. A Place Called Pennask: Fly-Fishing and Colonialism at a British Columbia Lake. BC Studies 133: 69-98.

Tobias, Terry. 2009. Living Proof: The Essential Data-Collection Guide for Indigenous Use-and-Occupancy Map Surveys. Vancouver: Ecotrust Canada and Union of BC Indian Chiefs.

Turner, Nancy J., Lawrence C. Thompson, M. Terry Thompson, and Annie Z. York. 1990. Thompson Ethnobotany: Knowledge and Usage of Plants by the Thompson Indians of British Columbia. Memoir No. 3 Victoria: Royal British Columbia Museum.

Upper Nicola Band Land Uses and Values. 2003. Internal document prepared for Nicola Similkameen Innovative Forestry Society

Upper Nicola Band. 2014. About Upper Nicola Band. Upper Nicola Band. http://uppernicola.com/about-upper-nicole-band/

Upper Nicola Band. 2014. N'Kwala School. Upper Nicola Band. http://uppernicola.com/programs-services/nkwala-school/

Ware, Reuben. 1978. Chillihitza's Petition to Governor James Douglas. Okanagan Historical Society 42: 53-59.

Wickwire, Wendy. 1998. "'We Shall Drink from the Stream and So Shall You": James A. Teit and Native Resistance in British Columbia, 1908-22. Canadian Historical Review 79 (2): 199-236.

Woolliams, Nina G. 1979. Cattle Ranch: The Story of the Douglas Lake Cattle Company. Vancouver: Douglas & McIntyre.

Wyatt, David J. 1972. The Indian History of the Nicola Valley, British Columbia. Ph.D. Dissertation. Department of Anthropology, Brown University.

12 APPENDICES

12.1 APPENDIX A: Traditional Use Interview Guide

Traditional Use Study Interview Guide

Interview Introduction (read before every recorded session)

Today is _____, 2014. My name is _____ and my co-researchers are _____. We're here at the _____ building interviewing _____ for the Upper Nicola Band Traditional Use Study for the Kinder Morgan Trans Mountain Pipeline. Everyone has read and signed the release forms and we have assigned the study ID #s _____. We are going to be mapping using Google Earth. The project area covers [verbal description of project area].

Thank you for coming here to talk today.

The maps that we are going to make are to help identify Upper Nicola Band interests in and around the Upper Nicola Band's Area of Responsibility, as represented on Google Earth.

In this interview we are going to try to map all of the most important ways that you, your families, and your community use this area both today and in the past. We are going to ask about places where people hunt and fish for food, about where people gather berries and plants, camp, and use trails. There may be stories about the places, or there may be knowledge that people are buried there. The places might be sacred, or maybe people just like to go there to get away. We will also be asking if you know about things in the area from direct experience, or if it is through stories or hearing from others. We would like to hear about all of the interests in the area that you know of.

It can take about 3-4 hours to get through all of the questions, so we will take breaks and try to make things interesting. We are going to start with questions about you, and then move to talking about hunting, fishing and all of the other themes.

I am going to ask now for each person in the room to take a turn saying hello and their name for the recordings.

Questionnaire for UNB's TUS regarding Kinder Morgan's proposed Trans Mountain Pipeline Expansion Project

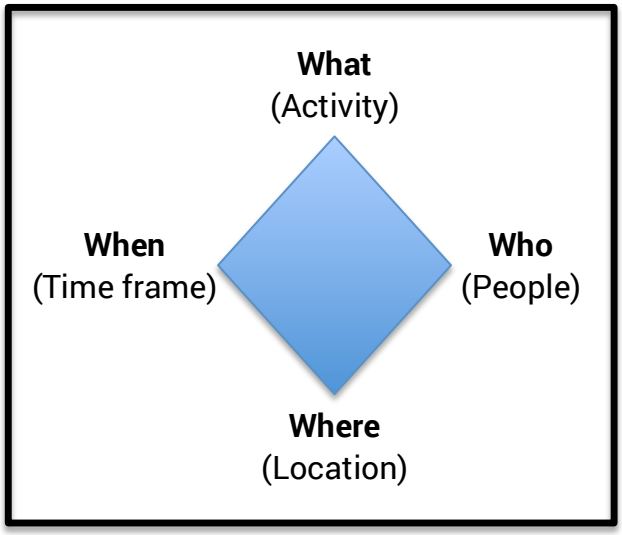
Biographical Questions:

1. What is your full legal name? Do you have a nickname? (For married women, do you have a maiden name?).
2. What is your date of birth?
3. Where did you grow up?
4. What is your mother's full legal name? (Did she have a different maiden name?).
5. Do you know your mother and father's dates of birth? (When did they pass on? How old were they when they died?).
6. Where did your mother grow up? Where did your father grow up?
7. Do you have brothers and sisters? What are their names and what order were they born in? (Which brothers and sisters are still with us today?).
8. Is there anything else you'd like to tell us about your family?
9. What languages were spoken at home when you were growing up? Do you still speak these languages?
10. Do you have a Syilx name?
11. Who taught you about your traditions (how to live off the land, history, stories etc.).

TUS Interview Guide

There are 5 general themes of questions. Below each theme has as brief description, a list of commonly used codes (in bold and italics), and typical questions for each theme.

***Key:** Keep in mind, that for each mapped site it is important to know:*



"who, what, when, where"

Habitation Sites (Paces where you live and stay):

In this section we are interested in knowing about any places around the study area that you have camped or stayed overnight. First we want to mark down specific areas in or near the study area where you've actually camped or stayed in cabins. We'll ask you about where your family or other community members have lived after.

X – Habitation Site

1. Are there any places around the study area where you have spent the night in a cabin or camp?
2. Was it a house, cabin, tepee, or a tent?
3. When did you live/stay there, and for how long?
4. When did people first stay there?
5. What year was it built?
6. Who built it?
7. What did you do there?
8. Do you know of other places where your parents or other family members, or community members camped or stayed in the area (including old cabins and old campsites)?

Cultural & Spiritual Sites, Trails and Place Names:

In this section we are interested in knowing about places that are special because of cultural or spiritual reasons.

GP-Gathering Place

1. In the study area, do you know of any Gathering (meeting) Places or Village Sites where First Nations people would get together?
2. Why would they get together?
3. Who would gather there, and at what time of year?
4. When was the last time people were there?

BU – Burial Site

1. Do you know of any Burial sites where members of your family or other people are buried?
2. When were the people buried there?
3. Who were they?

CP- Ceremonial Place

1. Are there any places that you or others have gone for Ceremonies like tea dances, drum dances, sweats, healings, feasts marriages, coming of age ceremonies, Christian tent meetings, or any other special spiritual or religious events that may have taken place?

SP – Spiritual Place

1. In the area around the Project, have you heard of places that are important for spiritual reasons? (Wasakechak, ghosts, part human/part animal people, etc.)? For example, places where it is not safe to go, or where you have to do special things or be quiet because of the things that are around?
2. What lives there?
3. How should people act if they go there?

TS – Traditional Stories

1. Have you heard of other places from Traditional Stories, Legends, or that are associated with local history that are close to the proposed Project?
2. What is the story?

PN – Place Names

OP – Orientation Point

TP – Teaching Place

1. Are there any other places in the area that are special because of Place Names, used as boundary markers, orientation points, or teaching places?

T – Trail

WT – Water Transportation Corridor

1. Are there any old roads, wagon roads, pack or foot trails, or water transportation corridors in the area?
2. When were these last used?
3. Do people access the area now? How?

Hunting & Fishing:

First we want to mark down the areas close to the Project area, or near by, that you have hunted and killed Animals (big and small game) for food or for your families or your community's own use. After that, we will ask you about other places in the area that you've heard of our people using, either a long time ago, or more recently.

H - Hunting (*trapping is below)

1. Are there areas in or near the Project area where you have hunted big animals for food or other uses?
2. What types of animals?
3. Was this in the past 15 years or longer ago?
4. Do other people in your family or community also hunt there?
5. Are there areas in or near the Project area where you have hunted small animals or birds?

Large animals commonly hunted in the project area may include:

Moose	Deer	Caribou	Grizzly Bear	Black bear	Woodland buffalo

Small animals and birds commonly hunted in the project area may include:

Beaver	Wolf	Rabbit	Porcupine	Muskrat	Eagles	Ptarmigan
Grouse	Chickens	Ducks	Geese	Swans	Loons	Owls

EG – Egg Gathering

1. Have you gathered wild eggs in or around the Project area?
2. What types?

F – Fishing

1. Are there areas in or near that Project area where you have fished?
2. What types of fish did you catch?

Fish commonly caught in the project area may include:

Lake Trout	Steelhead	Jackfish (Northern pike)	Whitefish
Ling Cod	Grayling	Pickerel	Perch

FW – Fishing Weir

1. Are there places in or near the Project area where members of your family or community use, or had used fishing weirs, traps, platforms, or other structures for fishing?

$T – Trapping

1. Have you or your family or community trapped in the study area?
2. What were you trapping?
3. Do you know of other places where your parents or other family members, or community members have trapped?

Animals commonly trapped in the study area may include:

Marten	Wolf	Beaver	Weasel	Fox	Mink
Fisher	Otter	Muskrat	Lynx	Wolverine	Squirrel

<u>Commercial and Non-Kill Uses:</u>

Are there other places around the area where you have hunted or fished, but didn't have any luck?

$F - Commercial Fishing

1. Have you ever caught fish for money (guiding/outfitting, commercial fishing)?
2. What fish, and where?

$H - Commercial Hunting

1. Have you ever hunted for money around the study area (guiding/outfitting)?
2. What were you hunting and where?

$M - Commercial Mushroom - (fungus) Gathering

1. Have you picked mushrooms or done other activities for money around the study area?

$Other – Other Commercial

1. Is there anything else that you have hunted, fished, harvested of gathered for money in the study area?

Gathering and Processing Sites:

In this section we are interested in knowing about places that people have used for gathering plants, medicines, water, smoking/drying and collecting minerals (salt, paints, flint). We want to mark down specific areas around the study area that you've used.

B - Berries

1. Are there areas where you have gone to harvest Berries?
2. Do you know of other places where people o?
3. What kind of berries are/were collected?
4. What time of year do you harvest?

Berries commonly collected in the study area may include:

Mooseberries	Low bush cranberries	Blueberries
Raspberries	Gooseberry	Saskatoon berries
Pin cherries	Choke cherries	Hazelnuts
Wild strawberry	Rose hips	

FP – Food Plants

1. Are there any areas where you have gone to collect Food Plants (mint, wild onions, etc.)?
2. How about other people?
3. What other kinds of plants are collected?

Plants commonly collected in the study area may include:

Muskeg Moss	Cow parsnip	Pitcher Plant/Frog pants	Fungus
Mint	Tiger lily	Labrador tea/Trapper tea	Rat root
Wild sarsaparilla			

MP – Medicinal Plants

1. Are there any places around the study area where you have gone to collect ceremonial or Medicinal Plants?
2. Are there other places people go to harvest?

FT – Firewood Harvesting

1. Is there an area that you know of that is used for harvesting firewood in or near the Project area?

2. What kind of wood would you use?

DW – Deciduous Wood (eg. Maple)
EW – Evergreen Wood (e.g. Spruce)

1. Are there any places where you have collected materials from trees?
2. What kind of tree? What was the purpose? Do you know of places where others go to harvest? Are the trees harvested deciduous or evergreen trees?

Tree materials commonly collected in the study area may include:

Willow	Alder	Poplar/Aspen
Tree (pitch/gum/sap)	Birch (bark)	White Spruce (cambium, gum)
Tamarack	White Spruce (including gum)	Jack pine
Water plants (rat root, cat tails)	Willow (including rotting willow)	

DF – Drying Fish
DM – Drying Meat
DB – Drying Berries

1. Are there places in or around the Project area that have been used for preserving food or preparing hides? Smoking or drying fish? Drying meat? Drying berries? Scraping or Preparing Hides?
2. Have these sites been used in the past 15 years or longer ago?
3. Do you know of other places where people go?
4. Are there any drying racks or other structures at this site?

Food/hide preserving activities commonly practiced may include:

Smoking fish	Drying fish	Drying berries or plants
Preparing hide	Drying meat	

WA – Water (drinking water source)

1. Where do you go to get water?
2. Do you know other places that people go?

M - Minerals

1. Area there any places that you go for collecting minerals, like special rocks for making tools, paint, or other uses?
2. Do you know areas where other community members go?

ML – Mineral licks

1. Do you know of any mineral licks used by Moose or any other animals?

Future, Prospective, and Other Use:

PropTR – Prospective Trapping area
ProspH – Prospective Hunting area
ProspF – Prospective Fishing area
ProspX – Prospective Camp/Cabin

1. Are there any special places or resources that you know of in the study area (special habitat, etc.) that you think will be important for the community in the future?
2. What are they, and why is this area special?
3. Are there any other special places where you go or that you know about in the Project area that you would like to have marked down?

Interview Conclusion: (read after every recorded session)

Today is _____, 2014.

My name is _____ and I'm here in the _____ building with _____. We have just finished interviewing _____ today for Upper Nicola Band Traditional Use Study. We've given him/her ID #_____. We've used (#) _____ SD cards (#)_____ and micro SD cards, we have are a total of _____ tracks on the digital recorder. We have saved the .kml file as _____. There were (#) _____of pages of notes taken in (#) _____ note book(s).

Interview Quick Reference Guide:

What, Who, When, Where for each of the following:

1. Habitation Sites:
    - *X – Habitation Site*
2. Cultural & Spiritual Sites, Trails and Place Names:
    - *GP-Gathering Place*
    - *BU – Burial Site*
    - *CP- Ceremonial Place*
    - *SP – Spiritual Place*
    - *TS – Traditional Stories*
    - *PN – Place Names*
    - *OP – Orientation Point*
    - *TP – Teaching Place*
    - *T – Trail*
    - *WT – Water Transportation Corridor*
3. Hunting & Fishing:
    - *H - Hunting*
    - *EG – Egg Gathering*
    - *F – Fishing*
    - *FW – Fishing Weir*
    - *$T – Trapping*
    - *$F - Commercial Fishing*
    - *$M - Commercial Mushroom - (fungus) Gathering*
    - *$Other – Other Commercial*
    - *$H - Commercial Hunting*
4. Gathering and Processing Sites:
    - *B - Berries*
    - *FP – Food Plants*
    - *MP – Medicinal Plants*
    - *FT – Firewood Harvesting*
    - *DW – Deciduous Wood (eg. Maple)*
    - *EW – Evergreen Wood (e.g. Spruce)*
    - *DF – Drying Fish*
    - *DM – Drying Meat*
    - *DB – Drying Berries*
    - *WA – Water*
    - *M - Minerals*
    - *ML – Mineral licks*
5. Future, Prospective, and Other Use:
    - *PropTR – Prospective Trapping area*
    - *ProspH – Prospective Hunting area*
    - *ProspF – Prospective Fishing area*
    - *ProspX – Prospective Camp/Cabin*

Interview Quick Reference Guide: Code Table

Code Table

B	Berries	ML	Mineral Licks
BM	Boundary marker	MP	Medicinal Plants
BU	Burial sites	NSS	Non-Site-Specific
CP	Ceremonial places	OC	Other concern
DB	Drying berries or plants	OP	Orientation points
DF	Drying fish	Other	Other
DM	Drying meat	PN	Place Name
DW	Deciduous wood (e.g., spruce)	SP	Spiritual Place
EG	Eggs	T	Trail
EW	Evergreen wood (e.g., aspen)	TP	Teaching places
F	Fishing	TS	Traditional stories
FT	Firewood harvesting	WA	Water
FP	Food plants	WH	Wild horses
FW	Fishing weir / trap	WT	Water transportation corridor
GP	Gathering Place or Village Site	X	Habitation site (cabin, house, campsite, etc.)
H	Hunting	$F	Commercial fishing
HA	Habitat animal	$H	Commercial hunting
HB	Habitat bird	$M	Commercial mushroom gathering
HF	Habitat fish	$Other	Commercial other
HR	Horse range	$T	Trapping
MI	Minerals		

12.2 APPENDIX B: List of Commonly Utilized Traditional Use Species

Incomplete list of Traditional Use Species prepared based on the Upper Nicola Band Land Uses and Values document (2003).

Common Name	Scientific Name	Species Type	Other Common Name(s)
Fresh Water Mussels	*Margaritifera falcata*	Mollusc	
Banana Slug	*Arilimax columbianus*	Mollusc	
Tree Toad (Pacific)	*Hyla regilla*	Amphibian	
Western Spotted Frog	*Rana pretiosa pretiosa*	Amphibian	
America Widgeon	*Anas americana*	Bird	
American Crow	*Corvus immer*	Bird	
Bald Eagle	*Haliaeetus leucocephalus*	Bird	
Barrow's Golden Eye	*Bucephala islandica*	Bird	
Belted Kingfisher	*Ceryle alcyon*	Bird	
Black Duck	*Anas rubrip*	Bird	American black duck
Blue Grouse	*Dendragapus obscurus*	Bird	
Calliope Hummingbird	*Stellula calliope*	Bird	
Canada Goose	*Branta canadensis*	Bird	
Canvasback Duck	*Aythya valisineria*	Bird	
Chukar	*Alectoris chukar*	Bird	
Common Golden Eye	*Bucephala clangula*	Bird	
Common Loon	*Gavia immer*	Bird	
Common Raven	*Corvus corax*	Bird	
Duck, Canvas Back	*Aythya Valsineria*	Bird	Canvas Back Duck
Duck, Green Winged Teal	*Anas Crecca*	Bird	Green Winged Teal Duck
Duck, Northern Pintail	*Anas Acuta*	Bird	Northern Pintail Duck
Golden Eagle	*Aquila Chrysaetos*	Bird	
Great Blue Heron	*Ardea herodias*	Bird	
Great Horned Owl	*Bubo virginianus*	Bird	Large Hoot-Owl
Hawk	*Buteo*	Bird	
Mallard Duck	*Anas Platyrhyhchos*	Bird	
Osprey	*Pandion haliaetus*	Bird	Fish Hawk

Ring-necked Pheasant	*Phasinus colchicus*	Bird	
Ruffed Grouse	*Bonasa Umbellus*	Bird	
Rufous Hummingbird	*Selasphous rufus*	Bird	
Spruce Grouse	*Dendragapus canadensis*	Bird	Fool Hen
Stellar's Jay	*Cyanocitta stelleri*	Bird	Blue Jay
Western Screech Owl	*Otus kennicottii*	Bird	
White Tailed Ptarmigan	*Lagopus leucurus*	Bird	
Brook Lamprey Eel	*Lampetra richardsoni*	Fish	
Brook Trout	*Salvelinus fontinalis*	Fish	
Brown Trout	*Salmo trutta*	Fish	
Bull Trout	*Salvelinus confluentus*	Fish	
Chum	*Oncorhynchus keta*	Fish	Dog Salmon
Coho	*Oncorhynchus kisutch*	Fish	Silver Salmon
Cutthroat Trout	*Salmo clarki*	Fish	
Dolly Varden	*Salvelinus malma*	Fish	
Kokanee Salmon	*Oncorhynchus nerka kennerlyi*	Fish	
Lake Trout	*Salvelinus namaycush*	Fish	Mackinaw
Lake Whitefish	*Coregonus clupeaformis*	Fish	
Ling Cod (Burbot)	*Lota lota*	Fish	Mariah
Pacific Lamprey Eel	*Lampetra tridentata*	Fish	
Peamouth Chub	*Mylocheilus caurinus*	Fish	
Pink	*Oncorhynchus gorbuscha*	Fish	Humpback Salmon
Rainbow trout	*Salmo gairdneri*	Fish	
Sockeye Salmon	*Oncorhynchus nerka nerka*	Fish	
Spring	*Oncorhynchus tshawytscha*	Fish	Chinook/ King Salmon
Steelhead	*Salmo gairdneri*	Fish	
Sucker	*Catostomus* spp.	Fish	
White Sturgeon	*Acipenser transmontanus*	Fish	
Whitefish (lake)	*Coregonus clupeaformis*	Fish	

Whitefish (mountain)	*Prospium williamsoni*	Fish	
Yellow perch	*Perca flavescens*	Fish	
Artist's fungus	*Ganoderma applanatum*	Fungus	Artist's conk
Chanterelle mushroom	*Cantharellus cibarius*	Fungus	
Cottonwood mushroom	*Tricholoma populinum*	Fungus	Sand mushroom
Early morel	*Verpa bohemica*	Fungus	
Gemmed puffball	*Lycoperdon perlatum (gemmatum)*	Fungus	
Giant puffball	*Calvatia gigantean*	Fungus	
Lightning mushroom	*Lepista praemagna*	Fungus	Ring Mushroom, Range Mushroom, Thunder Mushroom, Rainbow Mushroom, Spring Mushroom
Meadow mushroom	*Agaricus campestris*	Fungus	
Narrow-capped morel	*Morchella angusticeps*	Fungus	Sponge mushroom
Oyster mushroom	*Pleurotus ostreatus*	Fungus	
Pine mushroom	*Armillaria ponderosa*	Fungus	White matsutake
Shaggy mane mushroom	*Coprinus comatus*	Fungus	
St. George's mushroom	*Tricholoma gambosum*	Fungus	
Timber mushroom	*Hygrophorus eburneus*	Fungus	"Slimy mushroom" Ivory-cap Hygrophorus
Yellow morel	*Morchella esculenta*	Fungus	
Badger	*Taxidea taxus*	Mammal	
Bat	*Chiroptera* spp.	Mammal	
Beaver	*Castor canadensis*	Mammal	
Bighorn Sheep	*Ovis canadensis*	Mammal	Mountain Sheep
Black Bear	*Ursus americanus*	Mammal	
Black-tailed Deer	*Odocoileus hemionus columbianus*	Mammal	
Bobcat	*Lynx rufus*	Mammal	
British Columbia Moose	*Alces alces andersoni*	Mammal	

Canadian River Otter	*Lutra canadensis*	Mammal	
Cougar	*Felis concolor*	Mammal	Mountain Lion, Puma
Coyote	*Canis latrans*	Mammal	
Deer		Mammal	
Douglas Squirrel	*Tamiasciurus douglasii*	Mammal	
Ermine	*Mustela erminea*	Mammal	Stoat, Short-tailed weasel
Fisher	*Martes pennanti*	Mammal	Fisher Cat
Gray Wolf	*Canis lupus*	Mammal	
Grizzly Bear	*Ursus arctos-horribillis*	Mammal	
Groundhog	*Marmota monax*	Mammal	Woodchuck
Hoary Marmot	*Marmota caligata*	Mammal	Whistler
Long-tailed Weasel	*Mustela frenata*	Mammal	
Lynx	*Lynx canadensis*	Mammal	
Marten	*Martes americana*	Mammal	
Mink	*Mustela vison*	Mammal	
Mountain Goats	*Oreamnos americanus*	Mammal	
Mule Deer (Interior)	*Odocoileus hemionus hemionus*	Mammal	
Muskrat	*Ondatra zibethicus*	Mammal	
Northwestern Yellow-pine Chipmunk	*Tamias amoenus*	Mammal	
Pika	*Ochotona princeps*	Mammal	Rock-Rabbit
Porcupine	*Erethizon dorsatum*	Mammal	
Rabbit	*Lepus americanus*	Mammal	Hare
Red Fox	*Vulpes fulva cascadensis*	Mammal	
Red Squirrel	*Tamiasciurus hudsonicus*	Mammal	
River otter	*Lontras canadensis*	Mammal	
Rocky Mountain Elk	*Cervus elaphus*	Mammal	Wapiti
Striped Skunk	*Mephitis mephitis*	Mammal	
Townsend Chipmunk	*Tamias townsendii*	Mammal	
Wild Horse	*Equus caballus*	Mammal	
Wolverine	*Gulo luscus*	Mammal	
Yellow-bellied Marmot	*Marmota flaviventris*	Mammal	Woodchuck
Alder	*Alnus rubra*	Plant	

American milk-vetch	*Astragalus americanus*	Plant	
American stinging nettle	*Urtica diocia*	Plant	
American vetch	*Viela americana*	Plant	
Arctic lupine	*Lupinus arcticus*	Plant	
Arnica	*Arnica cordifolia, latifolia*	Plant	
Arrow-leaved balsamroot	*Balsamorhiza sagittata*	Plant	Spring Sunflower, Wild Sunflower
Asparagus	*Asparagus*	Plant	
Baldhip Rose	*Rosa gymnocarpa*	Plant	Dwarf Wild Rose
Balsam Fir	*Abies balsamea*	Plant	
Balsam Fir	*Abies amabilis*	Plant	Pacific silver fir
Balsam Poplar		Plant	
Baltic rush	*Juncus balticus*	Plant	
Baneberry	*Actaea rubra*	Plant	Bear Root
Baneberry (red and white forms)	*Actaea rubra, Actaea agruta*	Plant	
Bastard toad-flax	*Geocaulon lividum*	Plant	
Beaked hazelnut	*Corylus cornuta*	Plant	
Beaked sedge	*Carex rostrata*	Plant	
Birch Tree	*Betula papyrifera*	Plant	
Bitter cherry	*Prunus emarginata*	Plant	Wild cherry
Bitterroot	*Lewisia rediviva*	Plant	
Black cottonwood	*Populas trichocarpa*	Plant	
Black Currant	*Ribes hudsonianum*	Plant	
Black hawthorn	*Crataegus douglasii*	Plant	Black thornberry
Black Spruce		Plant	
Black Swamp gooseberry	*Ribes lacustre*	Plant	
Black Tree Lichen	*Bryoria fremontii*	Plant	Tree “Moss”
Black twinberry	*Lonicera involucrata*	Plant	Twinflower Honeysuckle
Blackcaps	*Rubus leucodermis*	Plant	Wild black raspberry, black caps, black cap raspberry
Blue Bells	*Hyacinthoides non-scripta*	Plant	
Blue wildrye	*Elymus glaucus*	Plant	
Bluebunch wheatgrass	*Agropyron spicatum elymus spicatus*	Plant	
Bog Blueberry	*Vaccinium uliginosum*	Plant	

Bog Cranberry	*Vaccinium oxycoccus*	Plant	
Bracted lousewort	*Pedicularis bracteosa*	Plant	
Brittle prickly-pear cactus	*Opuntia fragilis*	Plant	
Brown-eyed Susan	*Gaillardia aristata*	Plant	
Bunchberry	*Cornus canadensis*	Plant	
Chocolate lily	*Fritillaria lanceolata*	Plant	
Chocolate-tips	*Lomatuim dissectum*	Plant	Fern-leaved Desert-parsley
Choke cherry	*Prunus virginiana*	Plant	
Clasping twisted stalk	*Streptopus amptexifolius*	Plant	
Clustered Wild Rose	*Rosa pisocarpa*	Plant	
Coastal Black Gooseberry	*Ribes divaricatum*	Plant	
Columbia hawthorn	*Crataegus columbiana*	Plant	Red thornberry
Common dandelion	*Taraxacum officinale*	Plant	
Common horsetail	*Equisetum arvense*	Plant	
Common Juniper	*Juniperus communis*	Plant	
Common mitrewort	*Mitella nuda*	Plant	
Common Plantain	*Plantago major*	Plant	Broad-leaf Plantain, Frog leaf
Common red paintbrush	*Castilleja miniata*	Plant	
Common reed canary grass	*Phragmites communis*	Plant	
Common spike rush	*Eleocharis palustris*	Plant	
Common Yarrow	*Achillea millefolium*	Plant	
Cow Parsnip	*Heracleum lanatum*	Plant	
Creeping juniper	*Juniperus horizontalis*	Plant	
Cut-leaved anemone	*Anemone multifida*	Plant	
Devil's club	*Oplopanax horridus* or *horridum*	Plant	
Diamond willow	*Salix glauca*	Plant	

Douglas Fir	*Pseudotsuga menziesii*	Plant	False hemlock
Douglas maple	*Acer glabrum*	Plant	
Douglas's water-hemlock	*Cicuta douglasii*	Plant	
Dwarf blueberry	*Vaccinium caespitosum*	Plant	
Dwarf scouring rush	*Equisetum scirpoides*	Plant	
Dwarf willow	*Salix sp.*	Plant	
Edible horsehair	*Bryoria fremontii*	Plant	
Edible thistle	*Cirsium edule*	Plant	
Engelmann spruce	*Picea engelmannii*	Plant	Columbia spruce, mountain spruce, silver spruce
Fairy slipper	*Calypso bulbosa*	Plant	
False solomons-seal	*Smilacina racemosa*	Plant	
Falsebox	*Pachistima myrsinites*	Plant	
Few flowered shooting star	*Dodecatheon pulchellum*	Plant	
Field mint	*Mentha spp.*	Plant	
Fire weed	*Epilobium angustifolium*	Plant	
Five leaved bramble	*Rubus pedatus*	Plant	
Giant wild rye	*Elymus cinereus*	Plant	
Graceful cinquefoil	*Potentilla gracilis*	Plant	
Grand fir	*Abies grandis*	Plant	
Great mullein	*Verbascum thapsus*	Plant	
Green Alder	*Alnus crispa ssp. Sinuata*	Plant	
Green wintergreen	*Pyrola chlorantha*	Plant	Pyrola virens
Grouseberry	*Vaccinium scoparium*	Plant	Dwarf Red Blueberry
Heart leaved arnica	*Arnica cordifolia*	Plant	
Hemp dogbane	*Apocynum cannabinum*	Plant	Indian Hemp
High-bush Cranberry	*Viburnum edulis*	Plant	
Huckleberry		Plant	
Idaho Black Gooseberry	*Ribes irriguum*	Plant	
Indian Celery	*Lomatium nudicaule*	Plant	Barestem Desert-parsley

Indian Potato	*Claytonia lanceolata*	Plant	Spring Beauty
Indian tea	*Ledum grandulosum,*	Plant	Trapper's tea, Labrador tea
Kinnickinnic	*Arctostaphylos uva-ursi*	Plant	Chicken berry, Bearberry
Labrador Tea	*Ledum groenlandicum*		
Lance-leaved stonecrop	*Sedum lanceolatum*	Plant	
Larch (alpine/subalpine/ woolly/Lyall)	*Larix lyallii*	Plant	Tamarack
Large-leaved avens	*Geum macrophyllum*	Plant	
Leafy aster	*Aster foliaceus*	Plant	
Lemonweed	*Lithospermum ruderale*	Plant	
Lodgepole pine	*Pinus contorta*	Plant	Black pine, scrub pine, mountain pine, incorrectly called jack pine
Low pussytoes	*Antennaria dimorpha*	Plant	
Many-spined Cactus	*Opuntia polycantha*	Plant	Plains Cactus, Starvation Prickly-pear
Mariposa Lily	*Calochortus macrocapus*	Plant	
Marsh valerian	*Vaeriana dioica*	Plant	
Meadow death camas	*Zigadenus venenosus*	Plant	
Meadow horsetail	*Equisetum pratense*	Plant	
Menzies's campion	*Silene menziesii*	Plant	
Mock-orange	*Philadelphus lewisii*	Plant	Syringa
Mountain alder	*Alnus incana ssp tenuifolia*	Plant	Speckled alder, River alder
Mountain arnica	*Arnica latifolia*	Plant	
Mountain Ash (Sitka)	*Sorbus sitensis*	Plant	
Mountain Ash (Western)	*Sorbus scopulina*	Plant	
Mountain hemlock	*Tsuga mertensiana*	Plant	
Mountain lady slipper	*Calypso bulbosa*	Plant	

Mountain sweet cicely	*Osmorhiza chilensis*	Plant	
Mountain valerian	*Valeriana sitchensis*	Plant	Sitka valerian
Muskeg Moss		Plant	
Nodding Onion	*Allium cernuum*	Plant	
Nootka Wild Rose	*Rosa nutkana*	Plant	
Northern bedstraw	*Galium boreale*	Plant	
Northern black currant	*Ribes hudsonianum*	Plant	
Northern water horehound	*Lycopus uniflorus*	Plant	
Northwest sedge	*Carex concinnoides*	Plant	
Oak fern	*Gymnocarpium dryopteris*	Plant	
Oldman's whiskers	*Geum triflorum*	Plant	
Oregon grape	*Mahonia nervosa*	Plant	
Oregon grape (Tall)	*Mahonia aquifolium*	Plant	
Oval-leaved Blueberry	*Vaccinium ovalifolium*	Plant	
Oxeye daisy	*Leucanthemum vulgare*	Plant	
Pacific willow	*Salix lasiandra*	Plant	
Paper birch	*Betula papyrifera*	Plant	
Parsnip-flowered buckwheat	*Eriogonum heracleoides*	Plant	
Pasture sage	*Artemisia frigida*	Plant	
Peachleaf willow	*Salix amygdaloides*	Plant	
Pin Cherry	*Prunus pensylvanica*	Plant	
Pineapple weed	*Matricaria discoidea, Matricaria matricarioides*	Plant	
Pinegrass	*Calamagrostis rubescens*	Plant	
Pink wintergreen	*Pyrola asarifolia*	Plant	
Ponderosa pine	*Pinus ponderosa*	Plant	Yellow pine, bull pine, rock pine, western yellow pine
Prickly Wild Rose	*Rosa acicularis*	Plant	
Princes pine	*Chimaphila umbellata*	Plant	
Quackgrass	*Agropyron repens*	Plant	

Raspberry	*Rubus idaeus*	Plant	Common red raspberry, wild raspberry
Rattlesnake plantain	*Goodyera oblongifolia*	Plant	
Red columbine	*Aquilegia Canadensis*	Plant	
Red elderberry	*Sambucus racemosa*	Plant	
Red Willow	*Cornus stolonifera* (Michx.), *Cornus sericea* (L.)	Plant	Red-Osier Dogwood
Rocky mountain juniper	*Juniperus scopulorum*	Plant	
Rosy pussytoes	*Antennaria microphylla A. rosea*	Plant	
Rosy twisted stalk	*Streptopus roseus*	Plant	
Sage	*Artemisia frigida*	Plant	Pasture sage
Sagebrush	*Artemisia tridentate*	Plant	
Salmonberry	*Runus spectabilis*	Plant	
Sandbar willow	*Salix exigua*	Plant	Coyote willow, rope willow
Saskatoon Berry	*Amelanchier alnifolia (Nutt.)*	Plant	
Scouler's willow	*Salix Scouleriana*	Plant	
Scouring rush	*Equisetum hyemale*	Plant	
Sedges	*Carex spp.*	Plant	
Self-heal	*Prunella vulgaris*	Plant	
Shaggy peat moss	*Sphagnum squarrosum*	Plant	
Sharptooth angelica	*Angelica arguta*	Plant	
Short-beaked agroseris	*Agroseris glauca*	Plant	
Showy aster	*Aster conspicuus*	Plant	
Showy milkweed	*Asclepias speciosa*	Plant	Common western milkweed
Silverweed	*Potentilla anserina*	Plant	
"Silver Willow" Silverberry	*Elaeagnus commutata*	Plant	
Single delight	*Moneses uniflora / Pyrola uniflora*	Plant	
Sitka valerian	*Valeriana sitchensis*	Plant	

Sitka willow	*Salix scouleriana*	Plant	
Smooth scouring rush	*Equisetum laevigatum*	Plant	
Soapberry	*Shepherdia canadensis*	Plant	Soopalallie
Spike-like goldenrod	*Solidago multiradiata*	Plant	
Spreading dogbane	*Solidago multiradiata, Apocynum androsaemifolium*	Plant	
Spring beauty	*Claytonia lanceolata*	Plant	
Squaw current	*Ribes cereum*	Plant	
Star-flowered false Solomon's seal	*Smilacina stellata*	Plant	
Step moss	*Hylocomiun splendens*	Plant	
Sticky geranium	*Geranium viscosissimum*	Plant	
Stinging Nettle		Plant	
Strawberry	*Fragaria vesca*	Plant	Woodland strawberry
Subalpine fir	*Abies lasiocarpa*	Plant	Incorrectly called balsam fir
Tall scouring rush	*Equisetum hyemale*	Plant	
Thimbleberry	*Rubus parviflorus*	Plant	
Tiger lily	*Lilium columbianum*	Plant	
Timothy	*Phleum pratense*	Plant	
Trailing Raspberry	*Rubus pubescens (Raf.)*	Plant	Dewberry
Trappers tea	*Ledum grandulosum*	Plant	
Trembling aspen	*Populus tremuloides*	Plant	
Tule	*Scirpus aculus*	Plant	Roundstem bulrush, great bulrush
Twin flower	*Linnaea borealis*	Plant	
Water birch	*Spiraea betutifolia*	Plant	
Water-lily	*Nuphar lutea*	Plant	
Watercress	*Rorippa nasturtium-aquaticum*	Plant	
Western hemlock	*Tsuga heterophylla*	Plant	
Western larch	*Larix occidentalis*	Plant	Tamarack
Western mountain ash	*Sorbus scopulina*	Plant	
Western red cedar	*Thuja plicata*	Plant	
Western white pine	*Pinus monticola*	Plant	

White Birch	*Betula papyrifera (Marsh)*	Plant	Paper Birch, Canoe Birch, Birch Tree
White flowered rhododendron	*Rhododenderon albiflorum*	Plant	
White spruce	*Picea glauca (Moench)*	Plant	Canadian spruce, western white spruce, Alberta spruce, skunk spruce, cat spruce
White-stemmed gooseberry	*Ribes inerme*	Plant	
Whitebark pine	*Pinus albicaulis*	Plant	
Wild carrot	*Lomatium macrocarpum*	Plant	Large-fruited desert parsley
Wild Mint	*Mentha arvensis*	Plant	Tea Mint Peppermint, Canada Mint
Wild Onion	*Allium schoenoprasum*	Plant	Wild Chives
Wild Potato		Plant	
Wild Rose	*Rosa acicularis*	Plant	Prickly Rose
Wild Strawberry	*Fragaria virginiana (Duchesne)*	Plant	
Wild tarragon	*Artemisia dracunculus*	Plant	
Wild weeping willow	*Salix rigida*	Plant	Possibly yellow or MacKenzie willow
Wintergreen		Plant	
Wolf lichen	*Letharia vulpina*	Plant	
Wolf-willow	*Elaeagnus commutata*	Plant	
Wood Anemone	*Anemone quinquefolia*	Plant	
Wood's Wild Rose	*Rosa woodsii*	Plant	
Yarrow	*Achillea millefolium*	Plant	
Yellow avalanche lily	*Erythronium grandiflorum*	Plant	
Yellow bell	*Fritillaria pudica*	Plant	
Yellow salify	*Tragopogon dubius*	Plant	
Bull Snake	*Pituophis melanoleucus catenifer*	Reptile	Gopher Snake
Racer Snake	*Coluber constrictor*	Reptile	
Rubber Boa	*Charina bottae*	Reptile	Copper Snake

Western or Northern Pacific Rattlesnake	*Crotalus viridis oreganus*	Reptile	
Western Painted Turtle	*Chrysemys picta belli*	Reptile	

12.3 APPENDIX C: Authors' CVs

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ACADEMIC AND PROFESSIONAL QUALIFICATIONS

2005 M.A. Anthropology and Environmental Studies. University of Victoria.

1998 B.A. (Joint Honours), Anthropology and Sociology. McGill University.

- Member, Canadian Anthropology Society
- Member, American Anthropological Association
- Member, International Association of Impact Assessment
- Member, CineVic: Society of Independent Filmmakers

SUMMARY OF EXPERIENCE

Towagh Behr has conducted Traditional Knowledge (TK), Traditional Use Studies (TUS), and cultural documentation projects with over thirty Aboriginal communities in western and northern Canada in the past twelve years. His expertise is in working with communities to understand and communicate likely effects of industrial development upon traditional practices, cultures, languages, and communities. In addition to conducting ethnographic and archival research projects with communities, he has a technical background as a documentary filmmaker and website developer. Towagh has a BA (joint honours anthropology & sociology) from McGill University and an MA in cultural anthropology and environmental studies from the University of Victoria where his research focused on the use of New Media to work with First Nations in creating their own multimedia representations of their cultures, languages, and traditional knowledge. His academic work and community-based research has been supplemented by eight years of consulting experience working as part of multidisciplinary teams on environmental assessment processes. His academic and professional experience has provided a solid foundation in the interface of TEK, environmental assessment, and traditional systems of land and resource management. As an applied anthropologist, Towagh has worked with communities to integrate their TEK into environmental assessment processes for the oil and gas, mining, and energy sectors. He has also provided training and capacity building programs for First Nation communities that have included TUS research methods, interview methods, website development, and documentary video production.

In response to recurring challenges First Nations research partners were having managing diverse recordings (maps, audio, video, notes, etc.) made as a part of TUS and TEK studies, Towagh conceived of and led the development of an open-source web-based data management and mapping system. Over the past four years this web-based mapping and data management system he has grown this system into the Community KnowledgeKeeper, which is now used to manage research and consultation related data for over ten Aboriginal communities.

SELECT EMPLOYMENT HISTORY

Kwusen Research & Media Ltd. – Victoria, BC

Anthropologist/Principal (2010 - present)
Founder and Principal of a research and media production company specializing in serving indigenous communities. Duties include: Business management, staff supervision, design and delivery of traditional use studies; traditional ecological knowledge studies; Aboriginal interests impact assessments; independent review of environmental assessments; community-based research; archival research; training and local capacity building; and communication of project deliverables through video and webpages.

Integral Ecology Group Ltd. – Victoria, BC

Anthropologist/Principal (2011 - 2012)
Cultural Anthropologist and Principal in Integral Ecology Group - a specialist company focusing on applied ecological and cultural research providing consulting services that interface between human land uses and their supporting and surrounding environments. Duties include: design and delivery of traditional use studies; traditional ecological knowledge studies; Aboriginal rights and interests impact assessments; independent review of environmental assessments; community-based research; training and local capacity building; and communication of research project results through video documentaries and websites.

Golder Associates Ltd. – Victoria, BC

Anthropologist/Traditional Studies and New Media Specialist (2006 - 2010)
As a Traditional Use Studies Specialist and then as Traditional Studies Discipline Leader for British Columbia, delivered Traditional Use and Traditional Knowledge Studies. Duties included: supervision of staff, project administration; design and delivery of traditional use studies; traditional ecological knowledge studies; Aboriginal interests impact assessments; cultural impact assessment; independent review of environmental assessments; community-based research; archival research; training and local capacity building.

First Peoples' Heritage Language & Culture Council – Victoria, BC

Research Coordinator - First Peoples' Language Map of BC (2008)
Research, website development and administration for the creation of an online First Nations' language map of British Columbia (http://maps.fphlcc.ca). Conducted community-based interviews, research and community consultation to represent 203 First Nations and their 38 languages. Completed information architecture and customization of a website with mapping application. Interviewed First Nations community members, recorded and authored website content.

Kwusen Media – Victoria, BC

Cultural Anthropologist and New Media Producer (2005 - 2006)
Founder and Principal of a consulting and media production company specializing in the production of cultural, historic, and linguistic studies; videos, websites, and digital archives. Conducted research, analysis, and reporting on socio-economic criteria and indicators for land management and archival/literature reviews for Aboriginal rights and title. Provided video documentation, training in video production, website development, and management of language/culture revitalization projects.

Pacific Peoples' Partnership – Victoria, BC

Project Officer (2004)
Developed, conducted and administered a province-wide consultation process on the local impacts of globalisation. Organized and led public forums in ten communities, co-authored trade issues booklet, wrote reports, and budgets.

Nuu-chah-nulth Central Region Language Group – Ucluelet, BC

Anthropologist (2002 - 2004)
Worked with First Nations to address culture and language loss; and facilitated the creation of a regional community-based organization for culture/language revitalization. Conducted research on the application of new media within revitalization programs; and coordinated the production of a CD-ROM, documentary video and interactive video on TEK and language.

SELECT PROJECT EXPERIENCE

Mikisew Cree First Nation Indigenous Knowledge Study & Community KnowledgeKeeper, Northern AB
- Imperial's Aspen Project; 2013 (ongoing).

Trained community members to conduct research to document and assess the potential impacts of a proposed Oil Sands project on the First Nation's traditional land use, rights and interests. Tasks included training and project management, facilitating a data verification workshop, report and assessment writing. Management and implementation of MCFN CommunityKnowledgekeeper to manage all MCFN traditional use data, track consultation with industry and assess impacts of industrial development.

Athabasca Cree First Nation Community KnowledgeKeeper, Northern AB
- ACFN Community KnowledgeKeeper development and implantation; 2013 (ongoing).

Led the development and implementation of the ACFN CommunityKnowledgekeeper – data management, consultation tracking, and mapping system. Oversaw the import of all previous TUS data into the CKK database. Currently planning a TUS and assessment of impacts on land access.

Adams Lake Indian Band, BC
- TUS advisor and research methods trainer; 2013 (ongoing)

Trained Community Researchers on our Traditional Use Study research methods. Advised on data management and TUS program development.

K'ómoks First Nation Traditional Use Study, Southwestern BC

- BC Hydro's John Hart Regenerating Station Replacement Project and Compliance Coal's Raven Underground Coal Project; 2012-2013

Trained and worked with two community members to conduct two studies to assess the potential impacts of proposed project developments on the First Nation's rights and interests. Tasks included training and managing community researchers, historical research, conducting indoor interviews, field site validation, community verification and mitigations development workshop, and report writing.

Wahpeton Dakota Nation Traditional Land Use Study, Central SK

- Star-Orion South Diamond Project, Shore Gold Inc.; 2011-2012

The Wahpeton TLU was conducted for the Environmental Impact Assessment of the proposed Orion South Diamond Project. Tasks included review of relevant literature, a one-week training for Community Researchers, interviews with Elders and knowledgeable land users, field verification, a community verification and mitigations development workshop, and report writing.

Fort McKay IRC Overview-Level Traditional Land Use Study, Northern AB

- Dover Commercial Project, Dover Operating Corp.; 2010

Worked with First Nation and Métis community to, at an overview-level, document traditional land use values and conduct an impact assessment of the proposed Dover Commercial Project, a SAGD oil extraction project near Fort McKay, AB. Tasks included provision of a research methods workshop for community members, traditional use mapping interviews, community review workshop, ground-truthing (helicopter), reporting, assessment, and mitigations development. Provision of Expert Witness testimony on behalf of Fort McKay in regulatory hearing.

Fort McKay Industrial Relations Corporation Traditional Land Use Study, Northern AB

- Frontier and Equinox Projects, Teck and Silverbirch; 2010-2011

Worked with First Nation and Métis community to document traditional land use values and conduct an impact assessment of the proposed Frontier and Equinox oil sands mine near Fort McKay, AB. Tasks included provision of a research methods workshop for community members, traditional use mapping interviews, ground-truthing (helicopter & quad), community review workshop, reporting, assessment, and mitigations development.

Fort Nelson First Nation Traditional Use Study, Northeastern BC

- TransCanada Cabin Mainline, TransCanada Corp.; 2009-2010

Worked with First Nation to conduct a TUS and assessment of impacts to rights and interests from the proposed TransCanada Cabin Mainline natural gas pipeline near Fort Nelson, BC. Tasks included project management, community capacity building, methodology development, First Nations liaison, community-based mapping, focus group interviews, ground-truthing, reporting, assessment and mitigations development.

Fort Nelson First Nation Traditional Use Study, Northeastern BC

- Cabin Gas Plant, EnCana Corp.; 2009

Worked with First Nation to conduct a TUS and assessment of impacts to rights and interests from the proposed EnCana Cabin Gas Plant, near Fort Nelson, BC. Tasks included community capacity building, methodology development, First Nations liaison, archival review, community-based mapping, focus group interviews, ground-truthing and reporting.

Fort Nelson First Nation EA Review, Northeastern BC

- EnCana Cabin Gas Plant; 2009

Managed an independent technical review of the environmental assessment documents associated with the proposed EnCana Gas Plant. Tasks included First Nations liaison, coordination of technical

reviewers, First Nations interests assessment review, reporting and project management.

Traditional Land Use Assessment, Northeastern BC

- Roman Mountain Coal Project, Peace River Coal Inc.; 2008-2009

Conducted TUS and TEK studies as components of an environmental impact assessment for a proposed coalmine. Completed community-based research, archival and literature reviews, wrote reports and conducted impact assessment on Aboriginal rights.

Traditional Use Study, Southwestern BC

- Interior to Lower Mainland Transmission Line, BC Transmission Corp.; 2008

Conducted an overview-level TUS for planning of a linear electrical transmission project. Research involved archival review, field interviews and coordinated research with more than forty First Nations with traditional territories in the Fraser Valley, Fraser Canyon and in the vicinity of Nicola Lake. Tasks have included methodology development, interview protocols, First Nations liaison, conducting mapping interviews, archival reviews and reporting.

Public and First Nations Consultation, Vancouver Island BC

- Phase 3 Landfill, Elk Falls Mill, Catalyst Paper Corp.; 2007

Provision of public and First Nations consultation support including analysis of First Nations consultation requirements and strategic advice. Tasks included delivery of consultation tools including letters, contact matrices, and development of a public consultation website.

Traditional Use Study, Northeastern BC

- Horizon Mine Coal Project, CH2M Hill and Hillsborough Resources Ltd.; 2006-2007

Conducted TUS interview and mapping sessions for proposed developments with five Aboriginal communities. Completed archival and literature reviews and co-authored preliminary TUS report based on primary and secondary research data.

Traditional Land Use Study, Western AB

- Aseniwuche Winewak Nation; 2006

Advised on a video documentation, data management and archiving methodology for TUS. Provided video production, video editing and digital archiving training to build local capacity.

Review of Socio-economic Criteria and Indicators in Oceans Management, Canada

- Fisheries and Oceans Canada; Centre for Global Studies, University of Victoria; 2006

Provided research, analysis and data sources for a review of current experience and available precedents that may serve as models in the task of bringing economic, social and cultural considerations more fully into processes of integrated oceans management at the scale of Fisheries and Oceans Canada's Large Ocean Management Areas (LOMAs).

Literature Review of Potential Aboriginal Interests, Northeastern BC

- Kemess North Copper-Gold Mine, Northgate Minerals Corp.; 2006

Archival, cartographic and ethnographic literature review to determine soundness of Aboriginal rights claim for an environmental impact assessment process.

PUBLICATIONS

Behr, T., and B. Farrant. 2013. Traditional Use Study for the BC Hydro John Hart Generating Station Replacement Project. Prepared in collaboration with K'ómoks First Nation for BC Hydro.

Behr, T., J. Hazelbower, and L. Omani. 2012. Wahpeton Dakota Nation Community History. Wahpeton Dakota Nation, Prince Albert, Saskatchewan.

Behr, T., J. Hazelbower, and L. Omani. 2012. Overview-Level Traditional Land Use Study for SaskPower's Shore Gold Diamond Mine Transmission Line. Prepared in collaboration with Wahpeton Dakota Nation for SaskPower.

Behr, T., J. Hazelbower, and L. Omani. 2011. Overview-Level Traditional Land Use Study for the Shore Gold Star-Orion South Diamond Project. Prepared in collaboration with Wahpeton Dakota Nation for Shore Gold.

Behr, T. and A. Garibaldi. 2011. Traditional Land Use Study for the Teck and Silverbirch Frontier Project. Prepared in collaboration with the Fort McKay Industry Relations Corporation for the Teck and Silverbirch Frontier Project.

Behr, T. and A. Garibaldi. 2010. Overview-level Traditional Land Use Study for the Dover Commercial Project. Prepared in collaboration with the Fort McKay Industry Relations Corporation for the Dover OCPO Dover Commercial Project.

Peace River Coal Inc. [S. Trusler, **T. Behr**, and C. Candler] 2010. Roman Coal Project, Environmental Assessment Report, Volume 3, Section 21 First Nations Interests and Use. Prepared by Golder Associates for Peace River Coal.

Behr, T., P. Evans, and B. Keats. 2010. Traditional Use Study and Assessment of the Proposed TransCanada Horn River Mainline Project (Cabin Section). Prepared by Golder Associates Ltd. and Fort Nelson First Nation for EnCana Corp.

Golder Associates [Mundy, D. and **T. Behr.]** 2009. Independent Technical Review: Cabin Gas Plant Application for an Environmental Assessment Certificate. Prepared by Golder Associates for Fort Nelson First Nation.

Behr, T., L. Lowe, N. Thorpe, A. Tofflemire, K. Dhaliwal-Gill, P. Evans. 2009. Traditional Land Use Assessment of the Proposed Cabin Gas Plant Project. Prepared by Golder Associates Ltd. and Fort Nelson First Nation for TransCanada Pipelines Ltd.

Golder Associates Ltd. [C. Candler and **T. Behr**] 2007. Traditional Land Use Assessment of the Proposed Horizon Mine Coal Project. Prepared by Golder Associates for Peace River Coal Inc.

Behr, T. and R. Koppang. 2006. Socioeconomic Considerations in Large Ocean Management Areas. Centre for Global Studies, University of Victoria, British Columbia.

Behr, T. 2005. Hypermedia and Ethnographic Research: Nuu-chah-nulth and Upper St'át'imc case studies. Thesis submitted to the Faculty of Graduate Studies. University of Victoria, British Columbia.

Behr, T., M. deLuca, and K. Schacter. 2004. Trade Deliberations Guide. Pacific Peoples' Partnership, Victoria, British Columbia.

NEW MEDIA, WEBSITES, AND DOCUMENTARY VIDEOS

Moose Lake – home and refuge, Documentary Video, Northern Alberta

- Co-producer and Director; documentary video (20 minutes); 2013

Assembled and directed a team of camera operators, animators, video editor, music composer, and sound engineer. Completed interviews and final documentary video on Fort McKay's experience of oil sands development, the importance of Moose Lake as their last refuge from industrial development and the alarming pace at which industrial development may degrade their traditional territory and way of life. https://vimeo.com/72715280

Wahpeton Dakota Nation Community KnowledgeKeeper, Website, Central Saskatchewan

- Project Director; web-based data management system, mapping and traditional knowledge archive; 2011-2012

Provided overall specifications, and guidance for the development of a web-based data management repository for all interview data gathered as a part of two traditional land use studies. Directed the development of a website for public access to an interactive Dakota place names maps and TK of key species pages (http://wahpeton.ca).

Real Moose Country, Documentary Video, Northern Alberta

- Producer and Director; documentary video (24 minutes); 2011

Produced and directed a documentary that provides a window ifnto the challenges faced by an Aboriginal community of hunters and trappers struggling with their place in the increasingly industrialized landscape of northern Alberta.

Fort McKay Community KnowledgeKeeper, Website, Northern Alberta

- Project Director; web-based data management, mapping and industry consultation tracking system; 2011 - present

Provided overall specifications, and guidance for the development of a web-based traditional land use data management and traditional knowledge archive that can be queried against proposed industrial developments. Worked with First Nations staff to develop industry consultation tracking and documentation features. Provided ongoing direction and support for the creation of a web-based portal for the submission of proposed oil sands development project information to the First Nation (http://fmsd.fortmckay.com).

Athabasca Cree First Nation Community KnowledgeKeeper, Website, Northern Alberta

- Project Director; web-based data management, mapping and industry consultation tracking system; 2011 - present

Provided overall specifications, and guidance for the development of a web-based traditional land use data management and traditional knowledge archive that can be queried against proposed industrial developments. Worked with First Nations staff to develop industry consultation tracking and documentation features. Provided ongoing direction and support for the creation of a web-based portal for the submission of proposed oil sands development project information to the First Nation (http://acfn.kwuesen.com)

Mikisew Cree First Nation Community KnowledgeKeeper, Website, Northern Alberta

- Project Director; web-based data management, mapping and industry consultation tracking system; 2011 - present

Provided overall specifications, and guidance for the development of a web-based traditional land use data management and traditional knowledge archive that can be queried against proposed industrial

developments. Worked with First Nations staff to develop industry consultation tracking and documentation features. Provided ongoing direction and support for the creation of a web-based portal for the submission of proposed oil sands development project information to the First Nation (http://mcfn.kwusen.com).

Fort Nelson First Nation Community KnowledgeKeeper, Website, Northeastern BC
- Project Director; web-based data management, mapping and industry consultation tracking system; 2010 - present

Provided overall specifications, and guidance for the development of a web-based traditional land use data management and traditional knowledge archive that can be queried against proposed industrial developments. Worked with First Nations staff to develop industry referrrals tracking and documentation features. Provided ongoing direction and support for the creation of Lands Department website and web-based TK sharing projects (http://lands.fnnation.ca).

CONFERENCE PRESENTATIONS

Behr, T. 2013. Community-controlled Web-based Spatial Archive: postcolonial archive or neoliberal agent? American Anthropological Association Annual Meeting. Chicago, IL.

Behr, T. 2013. Unsettling the Record: Beyond the University. Invited Roundtable Speaker. Conference of the Canadian Anthropology Society, Victoria, British Columbia.

Behr, T. 2012. Tools for Power: Web-based Community Mapping and Assessment of Industrial Development. Conference of the Canadian Anthropology Society, Edmonton, Alberta.

Behr, T. 2012. Death by a Thousand Cuts: Facilitating Indigenous Peoples Assessment of Small Industrial Developments. Conference of the International Association for Impact Assessment, Porto, Portugal.

Behr, T. 2011. Traditional Knowledge on Demand. The Society for Applied Anthropology, Seattle, Washington.

Behr, T. 2010. Contested Cartographies: Culture vs. Industrial Development in Northeastern BC. Conference of the Canadian Anthropology Society, Montreal, Quebec.

Behr, T. 2009. Indigenous Voice and a Colony Re-imagined. Conference of the Canadian Anthropology Society, Vancouver, British Columbia.

Behr, T. 2008. Networking Indigenous Self-Representation + Colonizing Databases in Web 2.0. European Association of Social Anthropologists - workshop: Medial Practices and Cultural Producers. Universitat Overta de Catalunya, Barcelona, Spain.

Behr, T. April 2005. Community Histories in Photographs: engaging communities through photograph collections – Upper St'át'imc History in Photographs. UVic CURA Conference: Sharing Knowledge Through Research Partnerships, Victoria, British Columbia.

Behr, T. Dec 2004. Authority, (Re)presentations & (Re)productions: the construction of ethnographic hypermedia. American Anthropological Association Annual Meeting, Atlanta, Georgia.

Behr, T. May 2004. Indigenous Language and Culture out of Control: Computers as Indiscriminate Speakers of Nuu-chah-nulth. Conference of the Canadian Anthropology Society, London, Ontario.

Behr, T. March 2003. Bringing Back the Language. Society for Ethnobiology, Seattle, Washington.

Stella J. Spak, PhD

Tel.: 250 370-5007
email: stella@kwusen.com

ACADEMIC AND PROFESSIONAL QUALIFICATIONS

2001	PhD in Anthropology, University of Toronto. *Dissertation Title: "Canadian Resource Co-management Boards and their Relationship to Indigenous Knowledge: Two Case Studies".*
1995	M.A. Anthropology, Carleton University Ottawa Ontario. *Thesis Title: "The Communicative Difficulties of Integrating Traditional Environmental Knowledge Through Wildlife and Resource Co-management".*
1993	Zwischenprufung (equivalent to a B.A.), Ethnology, History, Anglistic, Albert Ludwigs Universitat, Freiburg, Germany

TEACHING AND COURSE DEVELOPMENT EXPERIENCE:

Sessional Lecturer, First Nations Studies, Simon Fraser University.
- "Introduction to First Nations Studies" Fall 2002, 2003 (undergraduate)

Sessional Lecturer, Indigenous Governance Programs, Faculty of Human and Social Development, University of Victoria.
- "The Indigenous – State Relationship" Fall 2003 – December 2007 (Online-Course)
- "Dene ethnography, history and contemporary political issues (land claims)." Reading and Research Seminar, Spring-Summer 2002
- "Indigenous-State Relationship Workshops, Sayisi Dene Nene Land Claims Office, Tadoule Lake" Spring 2002
- "Research Seminar" Graduate Research Methods Seminar, Fall 2001

Part time term faculty position, Camosun College.
"Introduction to Anthropology" Winter 2006

Sessional Lecturer, Department of Anthropology, University of Victoria
"Development Anthropology" Winter 2009

Teacher of Anthropology at Lester B. Pearson College of the Pacific in Victoria BC
- "First and Second Year Social and Cultural Anthropology" Sept. 2009- May 2013 (Introduction to the history and development of anthropological theory from the inception of the discipline to the present, ethnography, gender studies, nationalism and identity, globalization, resistance, colonialism and Indigenous issues in Canada and globally, development anthropology).

- Supervisor of Pearson Anthropology Student's Summer Fieldwork Projects Sept.2009-May 2013

GUEST LECTURES:
- "Anthropology of Science, Technology and Environment" University of Alberta, November 1999 (Dr. Eric Higgs)
- "State Resource Management, Environmental Epistemologies and Power" Public Lectures, Carleton University / University College of Cape Breton, May 2003

TEACHING ASSISTANT:
Prepared and held tutorials, facilitated discussions groups, presented course material, graded exams and term

papers, assisted in lectures and overall student assessment.

University of Toronto, Fall / Winter 1995 – 1997
- Introduction to Archaeology
- Introduction to Physical Anthropology
- Introduction to Anthropological Linguistics
- Introduction to Social and Cultural Anthropology

Carleton University, Ottawa. January 1994 - May 1995
- Introduction to Anthropology

RESEARCH EXPERIENCE AND SKILLS:
- May 2014 - Present: Researcher for of Kwusen Research and Media.

- January 2005- 2009: member of a research team contracted by the "Akwesasne Task Force on the Environment" in relation to the EPA Superfund cleanup site near Akwesasne. N.Y. Primary responsibility: working on the Cultural Impact Assessment aspects of Natural Resource Damage. I.e. determining the effects environmental contamination had on Mohawk Culture.

- May-August 2002: Developed for credit academic on-line version of IGOV 383 "The Indigenous-State Relationship" for the Indigenous Governance Program, Faculty of Human and Social Development at the University of Victoria.

- "Effectiveness of various co-management models in Canada." Presentation and workshop - Sayisi Dene Nene Land Claims Office and legal council. Winnipeg, June 2002

- January 2002: Developed course material tailored to the needs of the Sayisi Dene Nene Land Claims Office for delivery of IGOV 383 "The Indigenous-State Relationship" as ten consecutive workshops in the community.

- December 2000-February 2001: Co-Investigator on a project coordinated by Brian Egan and Dr. Michael M'Gonigle for the Eco-Research Chair of Environmental Law and Policy, University of Victoria. Researched and documented models of community-based management of renewable natural resources in British Columbia, Canada and Alaska. This work was published in Report 2 of "When there's a Way, there's a Will" Section: "Models of Community-Based Natural Resource Management".

- October 1998: Doctoral fieldwork in Inuvik and Tsiigehtchic NT. In order to compare crisis- based resource co-management boards such as the BQCMB to claims-based resource co-management I spent time in the office of the Gwich'in Renewable Resource Board in Inuvik and attended the Gwich'in Renewable Resource Board meeting in the Gwich'in community of Tsiigehtchic.

- June 1997- June 1998: Doctoral fieldwork with the Dene communities of Fond du Lac, Lac Brochet, Tadoule Lake and Lutsel K'e, focussing on the communities experience with the Beverly and Qamanirjuaq Caribou Management Board (BQCMB). Special emphasis was placed on the Board's attitude towards the communities' Environmental Knowledge. Structured and unstructured interviews in the communities thus focused on the community members experience with the BQCMB and its attitudes toward their concerns and knowledge. Interviews were also conducted with the BQCMB's government and community representatives. All BQCMB meetings over the 1996-98 period were attended, employing participant observation in order to understand the dynamics underlying its operations. Research results were presented to the communities and approved before completing and defending the dissertation in 2001.

- Provided expertise on the political, legal and historical background of co-management agreements as well as TEK and its use in Canada to Praxis Research Associates, Ottawa in regards to their work on the Royal Commission on Aboriginal People's Report.

- Conducted interviews, archival, computer and film research, as well as quantitative and qualitative data collection and analysis.

PAPERS AND CONFERENCE PRESENTATIONS:

Cultural Impacts of Environmental Contaminates on the Mohawks of Akwesasne. *Prepared for St. Regis Mohawk Tribe-Environment Division, by Taiaiake Alfred PhD, Theresa McCarthy PhD and Stella Spak PhD 2007.*

Knowledge, Power and Natural Resource Co-management in Canada. *Anthropologica pp. 233-246. Vol.47 No 2, 2005.*

Co-management in Canada.*"When there's a Way, there's a Will: Developing Sustainability through the Community Ecosystem Trust. Report 2, Models of Community-Based Natural Resource Management" Brian Egan and Lisa Ambrus eds. pp 41-47.*

Canadian Resource Co-management Boards and their Relationship to Indigenous Knowledge: Two Case Studies" *PhD Dissertation University of Toronto, 2001.*

The Communicative Difficulties of Integrating Traditional Environmental Knowledge Through Wildlife and Resource Co-management. *M.A. Thesis, Carleton University, 1995.*

Co-management in Canada. *Invited guest speaker at Pacific Peoples Partnership Conference: Governing the Environment: Pan-Pacific Perspectives on Indigenous Governance, Local Resources and Aid, September 2002.*

Indigenous Knowledge, Power and Natural Resource Co-management in Canada. *CASCA Conference, Windsor, May 2002. Paper Presentation:*

Canadian Resource Co-management and Traditional Environmental Knowledge. *Paper presentation: 8th International Symposium on Society and Resource Management, Bellingham, June 2000.*

Renewable Resource Co-management in the Canadian North and Traditional Knowledge. *Paper Presentation: Congress 2000 (CINSA Society), Edmonton, May 2000.*

Canadian Resource Co-management, Cross–cultural Communication and Traditional Environmental Knowledge *Paper Presentation: International Graduate School, Freiburg, Germany. December 1995.*

The BQCMB and the lack of TEK use in co-management arrangements. *Paper Presentation: LEARNED Conference, Montreal, May 1995*

Wildlife Management in the Future Nunavut Territory (NWT). *Presentation: The Fourth National Student Conference on Northern Studies, Ottawa. November 1994.*

SCHOLARSHIPS:

1999 - 2000: University of Toronto Dissertation Fellowship Award
1996 - 1999, University of Toronto Open Doctoral Fellowship
1997 - 1998: Arctic Working Group Travel Grant
1995 - 1996: Differential Fee Waver Scholarship

LANGUAGES AND CITZENSHIPS:

- German, English, French (Reading)
- Canadian Citizenship

Susannah Machelak, B.A., M.A.

Tel.: 250 896 6444
email: susannah@kwusen.com

ACADEMIC AND PROFESSIONAL QUALIFICATIONS

2011	Master of Arts in Anthropology, University of Victoria.
2009	Bachelor of Arts in Anthropology, University of Victoria

SUMMARY OF EXPERIENCE

Kwusen Research & Media – Victoria, BC
Indigenous Knowledge Researcher (March 2014-present)
Susannah Machelak has worked with Kwusen Research & Media as an Indigenous Knowledge Researcher since March of 2014. During her time with Kwusen, she has assisted with a number of Traditional Land Use Studies (TLUS), and other research projects with First Nations throughout western Canada. These include two TLUS conducted with the Fort McKay First Nation, one TLUS with the Athabasca Chipewyan First Nation, and one with the Mikisew Cree First Nation. During this work, tasks have included:

- Conducting and providing support for TLUS mapping interviews;
- Video capture and production;
- TLUS report writing;
- Ethnohistorical research and report writing; and
- Providing support and 'daily contact' for Community Researchers

SELECT EMPLOYMENT HISTORY

Vanden Berg and Associates – Sidney, BC
Anthropological Researcher (2013-2014)
As a Anthropological Researcher, serving Aboriginal communities, Susannah's focus included genealogical research, report writing, supporting First Nations negotiating teams in Impact and Benefit Agreement negotiations and implementation, and organizing and facilitating workshop sessions for community members.

University of Victoria, Department of Anthropology – Victoria, BC
Research Assistant (2011)
As a Research Assistant, Susannah was engaged on a number of projects including compiling research for the resubmission of Dr. Brian Thom's SSHRC-funded research proposal addressing the issue of overlapping Aboriginal Land Claims and shared territory within the treaty process. Other projects included co-authoring a report for Heritage Canada reviewing published studies, reports, and analyses related to the protection of traditional cultural expressions of Aboriginal communities in Canada from misappropriation and/or misuse from an intellectual property perspective and inventorying and digitizing of an extensive collection of research materials, anthropological field notes, and interview transcripts in preparation for QRS NVivo analysis.

Josh Hazelbower, B.A.

Tel.: 250 686-4967
email: josh@kwusen.com

ACADEMIC AND PROFESSIONAL QUALIFICATIONS

2010 B.A. Anthropology, University of Victoria.

- Member, Canadian Anthropology Society

SUMMARY OF EXPERIENCE

Kwusen Research & Media – Victoria, BC
Indigenous Knowledge Researcher (2011-present)
Josh Hazelbower has worked with Kwusen Research & Media as a Research Assistant since January of 2011. During his time with Kwusen, he has assisted with a number of Traditional Land Use Studies (TLUS), and other research projects with First Nations throughout western Canada. These include two TLUS conducted with the Fort McKay First Nation, two TLUS conducted with the Wahpeton Dakota Nation, and most recently, ongoing involvement in a traditional knowledge project being conducted with multiple Inuit groups in Nunavut. During this work, tasks have included:

- conducting and providing support for TLUS mapping interviews
- video capture and production
- TLUS report writing
- ethnohistorical research and report writing
- genealogical research
- technical support and 'daily contact' for Community Researchers

PUBLICATIONS

Behr, T., **J. Hazelbower,** and L. Omani. 2012. Wahpeton Dakota Nation Community History. Wahpeton Dakota Nation, Prince Albert, Saskatchewan.

Behr, T., **J. Hazelbower,** and L. Omani. 2012. Overview-Level Traditional Land Use Study for SaskPower's Shore Gold Diamond Mine Transmission Line. Prepared in collaboration with Wahpeton Dakota Nation for SaskPower.

Behr, T., **J. Hazelbower,** and L. Omani. 2011. Overview-Level Traditional Land Use Study for the Shore Gold Star-Orion South Diamond Project. Prepared in collaboration with Wahpeton Dakota Nation for Shore Gold.

PRESENTATIONS

Bennett, T.D., Farrant, B., **Hazelbower, J**. 2013. Innovations in Traditional Use Study Methods: Using Digital Media Tools to Map and Record Indigenous Knowledge. Canadian Anthropology Society (CASCA) International Conference, University of Victoria, BC.

Lynne Jorgesen

EXPERIENCE:

2009 – PRESENT	Cultural Heritage Resource Manager Upper Nicola Band, Douglas Lake, B.C.
2000 – 2009	Aboriginal Interest Project Research Coordinator Upper Nicola Band, Douglas Lake, B.C.
1999-2000	Nicola Watershed Traditional Use Study Annotated Bibliography Editor/Transcriber/Writer-Researcher Nicola Tribal Association, Merritt
1998	Teacher Assistant – INST 135: Okanagan History Nicola Valley Institute of Technology, Merritt
1996-1998	Writer-Researcher, Lower Nicola Band, Merritt
1993-1996	Communications Coordinator B.C. Hydro Aboriginal Relations Department, Vancouver
1988-1993	Communications Consultant: Editor, Media/Public relations, Writer-Researcher Vancouver
1988	Summer Intern The Vancouver Sun, Vancouver
1984-1988	Managing Editor Kahtou, published by Native Communications Society of B.C. Vancouver
1983-1984	Manuscript Editor Theytus Books, En'owkin Centre, Penticton
1979-1981	Managing Editor Nicola Indian, published by Nicola Valley Indian Administration, Merritt

…/2

1978-1979 Reporter
Indian Voice, published by Indian Homemakers' Association of B.C.
Vancouver

EDUCATION

1982 Program in Journalism for Native People
University of Western Ontario, London

1975 Grade 12 (Academic)
Merritt Secondary School, Merritt

APPLICABLE TRAINING

2004 Archaeological and CMT Inventory Training for Crew Members, Resources Information Standards Committee
B.C. Continuing Education

2003 Wildlife and Plant Modelling
Keystone Wildlife Research Ecological Consultants

2002 First Nations Resource Mapping
Keystone Wildlife Research Ecological Consultants

AWARDS

1999 Community Service Award
Aboriginal Media Arts Awards
Indigenous Arts Services Organization,
in partnership with the Ullus Collective, Penticton, B.C.

1987 Print - Best Editorial
National Aboriginal Communications Society
Annual Media Awards, Ottawa, Ont.