OSISKO DEVELOPMENT

CARIBOO GOLD PROJECT

SECTION 7.16: CULTURE

October 2022

OSISKO DEVELOPMENT

Cariboo Gold Project

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ABBREVIATIONS

Terminology used in this document has been defined where it is first used, while the following list has been presented to assist readers that choose to review only portions of the document.

Abbreviation	Description
%	percent
AIR	Application Information Requirements
BC	British Columbia
BMP	Best Management Practices
CRD	Cariboo Regional District
DMCS	DM Cultural Services Ltd
EA	Environmental Assessment
EAO	Environmental Assessment Office
IMA	Island Mountain Arts
LAA	Local Assessment Area
Landmark	Landmark Resource Management Ltd
m	metre
ODV	Osisko Development Corp.
Project	Cariboo Gold Project (proposed)
TLUOS	Traditional Land Use and Occupancy Study
TLUS	Traditional Land Use Study
RAA	Regional Assessment Area
VC	Valued Component
WLFN	Williams Lake First Nation

7.16 Culture

This section presents the effects assessment for the Culture Valued Component (VC) for the Cariboo Gold Project (the Project) as proposed by Osisko Development Corp. (ODV).

The Culture VC has three key subcomponents related to Indigenous communities, which are as follows:

- Plant species of cultural significance;
- Traditional foods; and
- Indigenous language and teaching.

The goal of this section is to provide the following information in relation to the above subcomponents:

- Effects to governance and stewardship systems;
- Effects to customs, beliefs and values;
- Effects to language and intergenerational knowledge transfer; and
- Effects to community and cultural cohesion.

The rationale for including the above is to maintain community culture and the ability to continue to use the land in the future as it is currently used or has been used in the past, as this is valued by Indigenous communities and individuals.

In addition to the above Indigenous-specific subcomponents, this section will also emphasize one non-Indigenous subcomponent – the District of Wells arts sector. Specifically, the District of Wells arts sector will be analyzed to assess the effects to resident artists, art schools, and galleries, as well as the effects to community and cultural cohesion. This subcomponent is being analyzed to maintain community culture as the arts are important to those who live and work in the District of Wells.

In particular, this section will provide: a review of the existing conditions that are relevant to the local communities and Indigenous communities; an evaluation of the potential, positive, negative, and cumulative effects; and mitigation measures.

The Culture VC is linked to the following VCs or chapters of the assessment:

- Vegetation (Section 7.7);
- Wildlife (Section 7.8);
- Freshwater Fish (Section 7.9);
- Employment and Economy (Section 7.10);
- Land and Resource Use (Section 7.11);
- Infrastructure and Services (Section 7.12);
- Indigenous nations (Chapters 11, 12, 13, 14 and 15); and
- Summary of Human and Community Wellbeing (Chapter 17.0).

Information from the Culture Existing Conditions Report and expanded on during the Process Planning Phase have been incorporated into this Chapter and therefore has not been included as a separate appendix.

7.16.1 Relevant Statutes, Policies and Frameworks

The Application Information Requirements (AIR) for the Project, issued by the British Columbia (BC) Environmental Assessment Office (EAO) in April 2021, outlines the requirements of the Culture Effects Assessment to meet the requirements under the BC *Environmental Assessment Act* (2018).

7.16.2 Assessment Boundaries

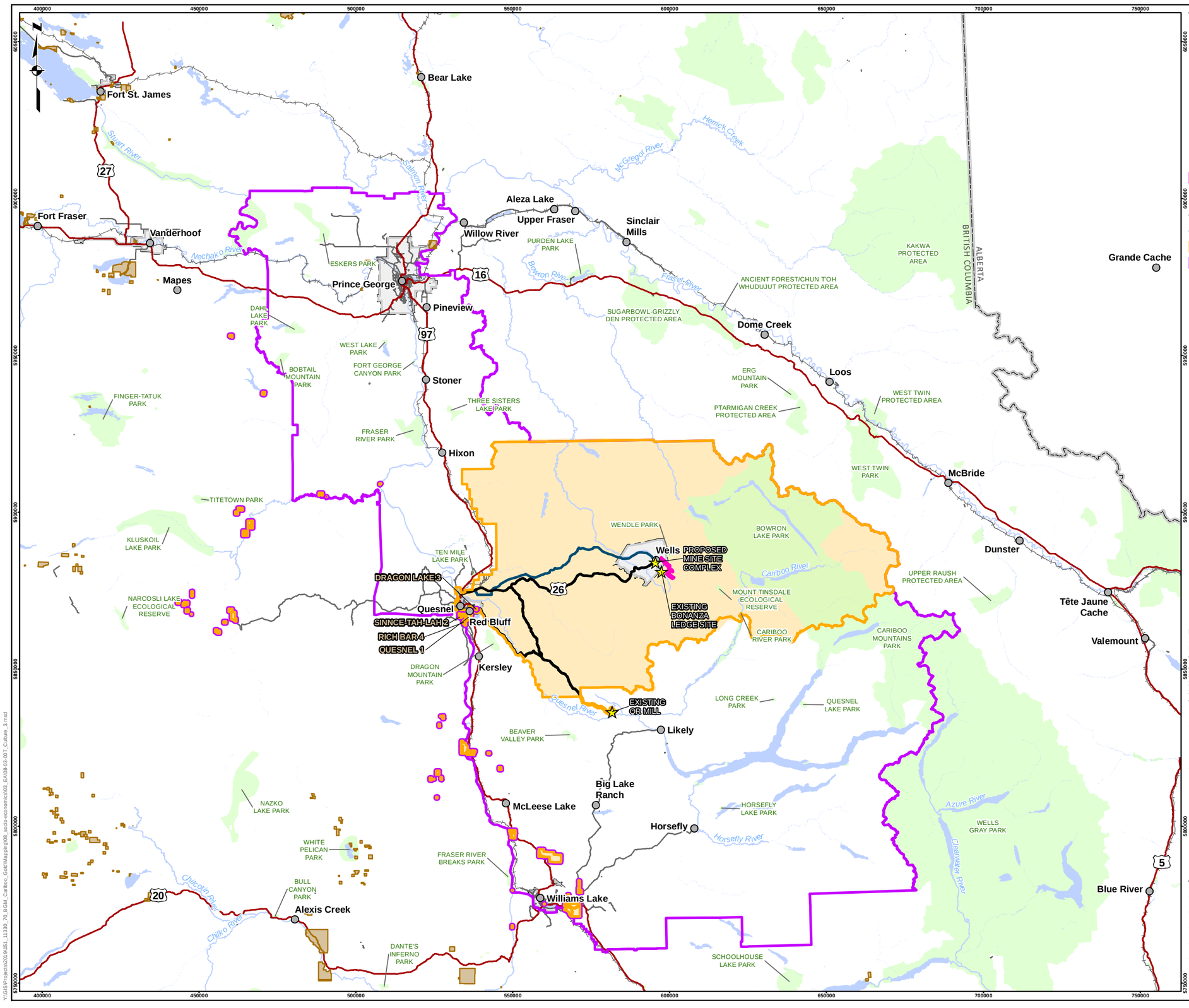
7.16.2.1 Spatial Boundaries

The spatial boundaries for assessment of the Culture VC consist of the Local Assessment Area (LAA) and the Regional Assessment Area (RAA) associated with each of the Project components.

Table 7.16-1 and Figure 7.16-1 identify the spatial boundaries for this Project's Culture considerations.

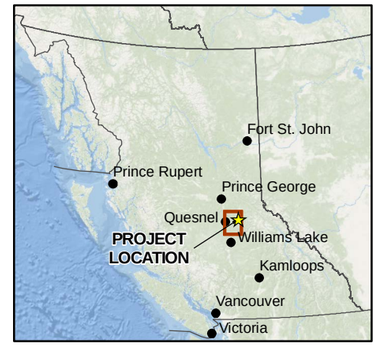
Table 7.16-1 Spatial Assessment Boundaries – Culture

Boundary	Component	Extent
Local Assessment Area	All Project components	• Participating in Indigenous nation's communities and/or reserves • Areas of traditional use and importance • Cariboo Regional District (CRD) Electoral Area C • 250 m buffer around facilities in CRD Electoral Area F
Regional Assessment Area	All Project components	• Participating in Indigenous nation's traditional territories • CRD Electoral Areas A, B, C, D, and F and Regional District of Fraser Fort George Electoral Areas A, C, D, and E



LEGEND

- POPULATED COMMUNITY
- MUNICIPALITY BOUNDARY
- HIGHWAY
- ROAD
- RAILWAY
- WATERCOURSE
- WATERBODY
- PARKS/PROTECTED AREA
- FIRST NATION RESERVE
- BARKERVILLE HISTORIC TOWN AND PARK
- PROPOSED PROJECT INFRASTRUCTURE LOCATION
- PROPOSED TRANSPORTATION ROUTE
- PROPOSED TRANSMISSION LINE ROUTE
- CULTURE LOCAL ASSESSMENT AREA
- CULTURE REGIONAL ASSESSMENT AREA



REFERENCE(S)

1. TRAILS, WATER FEATURES, ROADS, MUNICIPAL BOUNDARY, PARK/PROTECTED AREAS, BARKERVILLE HISTORIC TOWN/PARK, CITIES (INSET), PROVINCIAL BORDERS (INSET) OBTAINED FROM THE B.C. MINISTRY OF FORESTS, LANDS, NATURAL RESOURCE OPERATIONS AND RURAL DEVELOPMENT.
2. HILLSHADE DERIVED FROM LIDAR DATA FLOWN BY MCELHANNAY CONSULTANTS LTD. JUNE 27, 2016.
3. BASE DATA SOURCE: ESRI, GEOBASE, NRCAN, AND THE GIS USER COMMUNITY.
4. INSET BASE SOURCE: ESRI, DELORME, GEBCO, NOAA NGDC, AND OTHER CONTRIBUTORS.

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OSISKO DEVELOPMENT

CARIBOO GOLD PROJECT

CULTURE ASSESSMENT AREA

REV.	DESCRIPTION	DATE	INITIALS
A		11/16/2022	M.Y

PROJECT NO.	PHASE	REV.	FIGURE
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7.16.2.2 Temporal Boundaries

The temporal boundaries for the assessment of Project-related effects on the Culture VC encompass construction through to closure time periods for the proposed Project. These boundaries capture the time periods within which reasonable expectations of interaction with components and subcomponents of Culture can be predicted.

7.16.2.3 Administrative and Technical Boundaries

No administrative boundaries (limitations imposed on an Environmental Assessment (EA) by political, economic, or social constraints) nor technical boundaries (constraints imposed on an EA by limitations in the ability to predict the potential effects of a project) are identified for the Culture VC.

7.16.3 Existing Conditions

7.16.3.1 Information Sources

The Indigenous-specific information sources used to assess potential effects on Culture included:

- Lhtako Dené Nation Traditional Land Use and Occupancy Study Cultural Services Ltd. (DMCS);
- Xatśūll First Nation (Soda Creek Indian Band) and Williams Lake First Nation Traditional Land Use Study for Barkerville Gold Mines Cariboo Gold Project (January 2021), prepared by Landmark Resource Management Ltd. (Landmark);
- Indigenous nations websites;
- Community websites for the District of Wells (2021) and Barkerville Historic Town and Park (2021);
- Interviews with stakeholders conducted at various times between July 2019 and May 2021; and
- Engagement sessions conducted from 2019 through to 2021, which included community interviews.

Information was additionally gathered during engagement activities, as well as information from the Technical Advisory Committee was incorporated.

The baseline characterization of the Culture within the Project area is summarized in Section 7.15.3.4. The following information sources were reviewed as part of the existing conditions reporting.

Non-confidential traditional knowledge and land use information were provided for use in the effects assessment by Lhtako Dené Nation, Williams Lake First Nation, and Xatśūll First Nation.

7.16.3.2 Lhtako Dené Nation

7.16.3.2.1 Cultural History

Information provided in the Traditional Land Use and Occupancy Study (TLUOS) (DMCS, 2019) describes Lhtako Dené Nation as “a single regional group identified through its control of the territory along the Fraser River from above the West Road (Blackwater) River to below Stela.” Lhtako Dené Nation is identified as being near or based in Quesnel. Lhtako Dené Nation traditional territory is centred on the Fraser and Quesnel Rivers, and Lhtako Dené Nation ancestors lived in villages on Ahbau Lake, Bowron Lake, Punchaw Lake, Puntataenkut Lake, Ten Mile Lake, and Tzenzaicut Lake. Additionally, Lhtako Dené Nation traditional territory is described as “both banks of the Fraser River from the West Road (Blackwater) River south to a point near Alexandria, and then the west side of the

Fraser further south to the vicinity of Meldrum Creek. This territory also includes a significant area east of the Fraser, including the Cottonwood, Cariboo and Quesnel Rivers, the north Arm of Quesnel Lake, much of Bowron Lakes Provincial Park and an area around McBride." The TLUOS notes that linguistic analysis supports the situating of the Lhtako Dené people in a territory above and below the confluence of the Fraser and Quesnel Rivers. Moreover, the analysis based on conversations with Elders indicates that the Lhtako Dené *belongs* to this region.

The Dakelh people have occupied the vast area encompassing Barkerville, Wells, and the Bowron Lakes region since time immemorial. From archaeological reports, a pre-gold rush population lived at the Bowron Lakes from at least 1250 to the mid-nineteenth century. Trail networks throughout the Bowron area paired with accessible waterways also provide evidence of past use.

The first direct contact between Lhtako Dené Nation and Europeans within Lhtako Dené Nation traditional territory occurred in 1793, when Alexander Mackenzie, a North West Company fur trader, travelled downstream along the Fraser River. Lhtako Dené Nation way of life was relatively unaffected by European presence in the area, until the construction of the North West Company Fort Alexandria along the Fraser River in 1821. After the permanent established presence of Europeans, Lhtako Dené Nation traditional way of life was further disrupted. American fur traders and miners began to enter the Fraser River region, and further disruptions occurred after gold was found in the late 1850s and early 1860s. The influx of foreigners brought epidemic diseases such as smallpox and diptheria, which were devasting to Lhtako Dené Nation. In 1862, a major smallpox outbreak decimated many Indigenous nations across western Canada.

At the time of the Chilcotin War, in 1864, the Lhtako Dené Nation were living in a village at Quesnel but were subsequently forcibly removed from this village. According to oral history described in the TLUOS, the death of a townsman at the hands of a Lhtako Dené man resulted in the Lhtako Dené people being moved a few kilometres out of Quesnel.

By 1875, the Lhtako Dené Nation traditional village at the confluence of the Blackwater and Fraser Rivers had been abandoned due to the decimation of the population from smallpox. In 1881, a reserve was established for the Lhtako Dené Nation. The reserve referred to as *I.R. #1* provided limited access to the Fraser River, with much of the frontage in the area taken up by the Baker Ranch. The reserve included small areas of land suitable for cultivation, a fishery across the river from the village site, and small areas where numerous Lhtako Dené Nation gravesites were marked.

The gold rush started to end in 1868; however, the region had been opened for various industries and settlements, with additional settlers coming to the area after World War I, further displacing the Lhtako Dené traditional way of life. Over the next century, Lhtako Dené Nation has continued to assert their claims on their traditional territory and continuation of their culture.

Throughout the years, Lhtako Dené Nation has gained and lost community members. The Nation has adopted other families into the community from all around Lhtako Dené Nation territory. This includes Nazko, Kluskus, Ulkatcho, and others. (Lhtako Dené Nation Elders Interviews, Pers Comm. 2021).

7.16.3.2.1.1 Language

The people of Lhtako Dené Nation speak the Dakelh language and are sometimes referred to as the "Carrier," "Southern Carrier," or "Southern Dakelh" people in historical documents.

The 2016 Census provides information about language characteristics for both of Canada's official languages as well as Indigenous language for the portion of the Lhtako Dené Nation population living on-reserve (Table 7.16-2). In terms of official languages, English was spoken by all members and French was spoken by none. Forty of the 100 respondents spoke Indigenous languages, with more females than males speaking Indigenous languages. Approximately 30% of individuals learned an Indigenous language as their first language, and approximately 25% spoke an Indigenous language. More females than males speak Indigenous languages at home.

Table 7.16-2 Lhtako Dené Nation Language Characteristics, 2016

Language Characteristics	Total	Male	Female
Language Knowledge	100	50	50
Indigenous language(s)	40	10	30
English only	100	50	50
French only	0	0	0
English and French	0	0	0
Other	0	0	0
Indigenous languages first learned (%)	25	20	36.4
Indigenous language spoken at home (%)	25	20	36.4
Knowledge of Indigenous language (%)	40	20	45.5

Source: Government of Canada 2016 - Indigenous and Northern Affairs Canada, First Nation Detail, Lhtako Dené First Nation, Language

7.16.3.2.2 Governance

Lhtako Dené Nation was identified as a single regional group identified through its control of territory along the Fraser River from above the West Road (Blackwater) to below Stela (Moore and Wheelock, as cited in DMCS 2019). Lhtako Dené Nation maintained exclusive control of their territory and identified this territory with markers. The Lhtako Dené Nation qualifies as a band of related families that hunted, fished, and camped in the same area. There were five southern Dakelh bands in the early 1800s.

Today, Lhtako Dené Nation is an *Indian Act* band governed exclusively by the Chief and Council it elects in accordance with the *Indian Act*. Details are provided in Chapter 11.0.

7.16.3.2.3 Stewardship

As described in the TLUOS, there is strong evidence demonstrating pre-contact patterns of use and occupation in the Project area, which continued through the contact and gold rush era, as well as up-to and including the present. Early settler accounts of the region make a note of Dakelh and Indigenous occupation and seasonal patterns of use.

The TLUOS describes territorial ownership and control as a feature of Dakelh life and history. Lhtako Dené Nation ancestors actively protected areas of their territory. Lhtako Dené Nation maintained exclusive control of their territory and identified this territory's boundaries with markers.

The Dakelh people managed lands and territories under the framework of keyohs (family-held territories) and the bahlats (potlatch) legal system. Keyohs are land management units controlled by families and places where families hunted and gathered plants. Keyohs are characteristic of the eastern Dakelh and are typically inherited through the father's lineage. Keyoh-holders were responsible for managing the resources on their keyoh, undertaking a form of land stewardship. At a social level, keyohs are "corporate economic units."

As described in the TLUOS, Lhtako Dené Nation resilience in the face of challenges associated with colonialism is related to "*never giving up on protecting their keyoh.*" In Lhtako Dené Nation context, keyoh is the name of the collective territory rather than a set of family-controlled territories. The TLUOS further notes that in conversations with Lhtako Dené Nation about territory and stewardship, keyohs were not mentioned, leading the authors to conclude that keyoh management is less obvious among the Lhtako Dené Nation than in Dakelh groups to the north.

Potlatching is part of Lhtako Dené Nation tradition. Community decisions were made at potlaches, and such decisions frequently involved the maintenance of territory, especially in times of perceived threats from other groups in the region (DMCS, 2019).

7.16.3.2.4 Customs, Beliefs, and Values

Lhtako Dené Nation knowledge of their territory is based on a relationship with the land that is rooted deeply in time. It has been shared between generations and reflects an empirical understanding that short-term visitors cannot always appreciate or know (DMCS, 2019). Lhtako Dené Nation people move widely across their territory in pursuit of food and other resources. The activities of fishing, freshwater resource harvesting, trapping, hunting, berry picking, trading, and plant gathering have taken place in the region over generations.

As described in the TLUOS, the historical record points to the existence of a well-developed system of personal and group ownership of resources and territories and protocols for asking permission to enter territories or to access resources. Both historical evidence and contemporary scholarship show that, like the groups of the middle Fraser River, the Lhtako Dené Nation made use of complex hunting and gathering adaptations that were well-suited for their region.

The Lhtako Dené Nation seasonal round emphasizes the importance of the Fraser River salmon run. Fishing has played a prominent role in Lhtako Dené Nation history and remains an important part of the community today. The TLUOS attributes the relatively large population of past Lhtako Dené Nation – prior to disease epidemics such as smallpox – to the Fraser River salmon. The importance of fish is further discussed in Section 7.16.3.2.4.1.

The overland trail systems are both understood as a practical means for accessing other places and as a tangible reflection of ongoing connection to the entire territory.

It is important to the Lhtako Dené Nation that continued access to healthy fish, and fur-bearing animals are maintained in this region to ensure the continued practice of traditional harvesting activities. It is also important that these places are maintained so that the younger generations will have locations to hunt. Certain animal and plant species are considered sacred (such as bears), and it is important that these species are protected. Two trapping areas have been denoted within the proposed Project area (DMCS, 2019), and community interviews described a trapline near 500 Nyland Lake Road (Lhtako Dené Nation Community Liaison Interviews, 2021).

Spiritual and named places retain cultural importance through oral histories and teachings. Traditional knowledge is passed on to new generations through access to these locations. The TLUOS indicates that there are two sites within the Project area that are culturally sensitive and spiritually significant for the Lhtako Dené people. Other spiritual places may be birth or burial sites. As described in the TLUOS, a Lhtako Dené Nation knowledge holder identified the approximate location of burial along Highway 26 near Pinegrove.

Other spiritual places may be birth or burial sites. As described in the TLUOS, a Lhtako Dené Nation knowledge holder identified the approximate location of burial along Highway 26 near Pinegrove. Community interviews conducted in 2021 described burial sites along Highway 26 and concerns regarding disturbing these areas through ground disturbance activities such as digging (Lhtako Dené Nation Community Liaison Interviews, 2021)

It is also believed that traditions and informal arrangements keep a community together. Another example for Indigenous communities would be to respect the language and traditional practices that make that community unique, which bonds a community together.

7.16.3.2.4.1 Fish

Fish of cultural use and value to the Lhtako Dené Nation are described in Table 7.16-3 and include Char, Dolly Varden, Lingcod, Sturgeon, Suckers, Trout, Rainbow Trout, Whitefish, and Chum, Pink, Sockeye, and Chinook Salmon. Char species reference Arctic Char; however, Char likely refers to other Salvelinus species such as Bull Trout or Lake Trout, as Arctic Char distribution occurs further north. During the summer, Chinook Salmon are harvested in early July and Sockeye Salmon in late July. During the winter, Whitefish, Char, Dolly Varden, and Sturgeon are important fish species captured during ice fishing. Quesnel Lake is considered critical to the survival of large runs of salmon.

Jack of Clubs Lake was previously used for fishing, but concerns over water quality and contamination in the Lake have prevented the use of this lake for fishing.

Table 7.16-3 Fish Species of Cultural Interest - Lhtako Dené Nation

Fish Species	Lhtako Dené Nation		
	Scientific Name	Season(s) Harvested	Locations Captured
Char	Salvelinus sp	October	Lakes during spawning
Dolly Varden	Salvelinus malma	-	-
Lingcod	Lota lota	-	Rivers and Lakes
Chum Salmon	Oncorhynchus keta	-	-
Pink Salmon	Oncorhynchus gorbuscha	-	-
Sockeye Salmon (Kokanee)	Oncorhynchus nerka	Spring	Rivers and lakes
Chinook Salmon (spring salmon)	Oncorhynchus tshawytcha	July	Streams
Sturgeon	Acipenser transmontanus	-	-
Suckers	Catostomus macrocheitus	-	Rivers
Trout	Salmo gairdneri	Spring	Lakes
Rainbow Trout	Oncorhynchus mykiss	-	-
Whitefish	Prosopium williamsonii	-	Rivers and Lakes

7.16.3.2.4.2 Wildlife

There are several species of Indigenous cultural use and value and Indigenous knowledge in Lhtako Dené culture. This is shown in Table 7.16-4 below:

Table 7.16-4 Wildlife Species of Cultural Interest - Lhtako Dené Nation

Wildlife Species	Lhtako Dené Nation		
	Food Source	Cultural Significance	Hunting and Trapping
Marten		✓	
Lynx		✓	
Fisher		✓	✓
Fox		✓	
Squirrel		✓	
Deer	✓		
Moose	✓		
Beaver	✓		
Black Bear		✓	
Southern Mountain Caribou		✓	

The Lhtako Dené Nation has identified Southern Mountain Caribou as a Species of Cultural Significance

7.16.3.2.4.3 Plant Species of Cultural Significance

Based on the Lhtako Dené Nation TLUOS, Indigenous nation peoples move widely across their territory in pursuit of food and other resources, which includes berry picking and plant gathering. Twenty-three plant and berry harvesting sites were identified over the course of the TLUOS, while food and medicinal plants are also found in the region. During interviews conducted with a Lhtako Dené Nation Knowledge Holder, an important berry collecting area that is visited first during the seasonal round was noted near 500 Road. This area included cranberries, huckleberries, saskatoons and soapberries. Ground truthing also identified a berry picking site along the Swift River Forest Service Road.

Two culturally modified trees were also identified in the LAA, with one reported to be located in close proximity to the Surface Footprint.

Baseline field study results identified at least one traditional use plant species occurs in most ecosystem units mapped in the LAA. The five most frequently detected plant species of cultural significance are subalpine fir, hybrid white spruce, bunchberry, black huckleberry, and red currant, which respectively occur in 361 (69%), 281 (53%), 223 (42%), 197 (37%), and 168 (32%) of the 527 completed Terrestrial Ecosystem Mapping field verification plots with detailed vegetation species information.

A summary of these findings can be found in Section 7.7 Vegetation.

7.16.3.2.5 Knowledge Transfer

Lhtako Dené Nation knowledge transfer is through various methods. Cultural camps are held specifically to ensure the passing of these skills to younger generations. Oral histories and teachings are also important to describe spiritual and cultural sites. Trapping of small fur-bearing animals is fundamental to the Lhtako Dené Nation traditional mode of life and the transmission of cultural values and traditions.

As of today, Lhtako Dené Nation members still reuse most of the plant species and the forest for daily food gatherings, medicine, and traditional teachings for cultural education for the next generation (Lhtako Dené Nation Elders Interviews, 2021).

7.16.3.2.6 Cultural Practices and Community Health

As described in the TLUOS, the Lhtako Dené Nation moved widely across their territory to gather food and other resources. Activities such as fishing, freshwater resource harvesting, trapping, hunting, berry picking, trading, and plant gathering have taken place over generations. It is important to the Lhtako Dené Nation that they have continued access to healthy fish and fur-bearing animals in their territory.

Lhtako Dené Nation members indicated how their hunting practices follow the community's seasonal round and emphasized the importance of maintaining traditional hunting practices. The timing, methods, and locations related to hunting, trapping, fishing, and plant gathering are closely related to the Lhtako Dené Nation seasonal round.

The Lhtako Dené Nation have traditionally relied on big game hunting to provide food for the community; deer and moose continue to be of particular importance to Lhtako Dené Nation hunters. Food and medicinal plants are also found in the region. Important berry species include cranberries, huckleberries, Saskatoon berries, and soapberries.

7.16.3.3 Williams Lake First Nation

7.16.3.3.1 Cultural History

For thousands of years, Northern Secwépemc people lived in semi-permanent villages in the winter and travelled on the land in a seasonal round between hunting, fishing, plant harvesting, ceremonial, and trading sites (WLFN, 2021a) in the warmer months. Until the early 1800s, the Secwépemc were the only inhabitants of their traditional territory and lived in relative peace and harmony with neighbouring Nations (Billy, 2009, as cited in Landmark, 2021). From the arrival of the first non-Indigenous peoples in 1793 to today, there have been a number of events that have affected the culture and identity of the Secwépemc people, including the Williams Lake First Nation. These events, as discussed in the TLUOS, are the fur trade, the Gold rush and settler colonialism, assimilation and Indian Reserves, epidemics, and missionaries and residential schools.

7.16.3.3.1.1 Fur Trade

Alexander Mackenzie of the North West Company arrived in Secwépemcúĺecw in 1793. By 1808, Simon Fraser was in northern Secwépemc territory and relying on Indigenous Knowledge in his search for a navigable route to the Pacific (Teit, 1909 as cited in Landmark, 2021). Traders began developing trading posts in 1811, and, over time, these were consolidated and then taken over by the Hudson's Bay Company in 1821 (Coffey et al., 1990 as cited in Landmark, 2021).

The relationship between Secwépemc and the fur traders was initially mutually beneficial and peaceful (Coffey et al., 1990 as cited in Landmark, 2021) as Secwépemc were able to control their involvement in the trade and because non-Indigenous traders relied on Secwépemc Indigenous Knowledge and territory to help maintain the posts (LeBourdais 2009 as cited in Landmark, 2021). However, within ten years, major changes started to occur across Secwépemcúĺecw. As beaver and big game animals declined rapidly, competition for trapping areas led neighbouring Indigenous nations to establish boundaries between their territories, and the Secwépemc society and family structure changed (Coffey et al. 1990; Billy 2009 as cited in Landmark, 2021) as the mixing of cultures affected the beliefs, customs, and values of Secwépemc society.

As beaver declined, salmon became the key trading item. The subsequent reduction in salmon, and the decreased success in trapping, led to the first of a number of periods of starvation (Coffey et al., 1990, as cited in Landmark, 2021). The relationship between the traders and Secwépemc eventually turned to open hostility, and as the fur trade was ending and Secwépemc life had undergone a significant change, mining came to Secwépemcúĺecw (Landmark, 2021).

7.16.3.3.1.2 Gold Rush and Settler Colonialism

The gold rush increased the effects of settler colonialism on Secwépemc's traditional life and lands. Oral histories and written sources show that Secwépemc knew that there was gold on their land before the non-Indigenous miners arrived (Coffey et al. 1990 as cited in Landmark, 2021). The arrival of miners on Secwépemc territory led to conflict as miners and Secwépemc clashed over gold and food supplies (Coffey et al., 1990 as cited in Landmark, 2021). However, records indicate that Secwépemc was again essential to the survival of the miners as Secwépemc communities traded with them, provided them with food and goods, and acted as guides and translators (Cariboo Chilcotin Coast Tourism Associations, 2020 as cited in Landmark, 2021).

Within the settler society, the appointment of James Douglas as the first Governor of the Colony of British Columbia in 1858 represented a transition of colonial interest from the fur trade to settlement (Fisher, 1977).

7.16.3.3.1.3 Assimilation and Indian Reserves

By the late 1850s, Douglas maintained that the Indigenous peoples should be assimilated and provided with enough land to allow them to support themselves while they adjusted to "*civilized life*" (Harris, 2012 as cited in Landmark, 2021). Douglas' successor changed this position, and smaller amounts of land were set aside for the Indigenous people (Trutch, 1867: p. 42 as cited in Landmark, 2021). While pre-emptions were not allowed on Indian reserves, Williams Lake First Nation was displaced from their traditional village in the 1960s to allow for settler occupation (Williams Lake Indian Band vs Canada 2018 as cited in Landmark, 2021). On February 2, 2018, the Supreme Court of Canada released its decision in Williams Lake Indian Band v Canada (Aboriginal Affairs and Northern Development), 2018 Supreme Court of Canada 4, ruling the Williams Lake First Nation was wrongfully displaced from its village lands, and the Nation received monetary compensation.

The loss of land and resources resulted in starvation and marginalization of Secwépemc. Furthermore, the influx of non-Indigenous people onto Secwépemc territory had drastic impacts on Secwépemc land and life (Landmark, 2021).

7.16.3.3.1.4 Epidemics

Non-Indigenous presence also brought disease and epidemics, which resulted in the loss of many elders, resulting in the further loss of many centuries of accumulated oral history, skills, and knowledge. This made the Secwépemc less able to defend their lands and their culture from a permanent change at the hands of newcomers. The death of their young challenged the very survival of the Secwépemc people (Coffey et al., 1990 as cited in Landmark, 2021).

7.16.3.3.1.5 Missionaries and Residential Schools

Part of the forced Indigenous assimilation process involved placing Indigenous children in non-Indigenous educational systems. Prior to the 1876 *Indian Act*, this meant missionaries were teaching at day schools on reserves. The schools were replaced by two residential schools in the Cariboo Region: Kamloops Residential School and Cariboo Indian Residential School (St. Joseph's Mission Residential School) (Sellars 2013 as cited in Landmark, 2021). St. Joseph's Mission Residential School operated until 1981 (Story 2005 as cited in Landmark, 2021).

The effects of residential schools continue to be experienced in Indigenous communities (Sellars 2013, as cited in Landmark, 2021). However, Secwépemc culture, identity, and land use practices have shown strength and resilience despite colonial land appropriation and environmental degradation (Landmark, 2021).

7.16.3.3.1.6 Language

According to Secwépemc oral history, Secwépemctsín (the language of the Secwépemc) was given to the people by the Creator and his helpers Old One and Sek'lep (Coyote) for communication with the natural world. For Secwépemc, Secwépemctsín is not only a form of communication – it is also a way of being and a way of life.

Secwépemctsín contains the cultural, ecological, and historical knowledge, which includes values, beliefs, rituals, songs, stories, social and political structures, and spirituality of the people. It contains the mental, physical, and spiritual connectedness of the Secwépemc to the land and maintains their responsibility to the land. It keeps the people whole and connected to the Creator. The language contains traditional ecological knowledge needed to protect biodiversity. This knowledge passed down through generations orally contains the teachings necessary to maintain Secwépemc culture and identity (First Voices).

Secwépemctsín is an Interior Salish language. The Secwépemctsín sound system consists of 43 consonants and five vowels. Many of these sounds are not found in the English language and are difficult to learn. Until about 45 years ago, Secwépemctsín was an oral language. A writing system was developed for Secwépemctsín but is not accurate as the vowel sounds do not represent the Secwépemc sounds accurately (First Voices).

Residential schools and the "Sixties Scoop" resulted in a break in the vital connection of language to oral tradition practice. Increasing Secwépemc scholarship and grassroots initiatives are advocating for and implementing Secwépemctsín language revitalization projects, both in and out of communities.

Today, Williams Lake First Nation is working to revive its traditional language and has created a mentorship program, pairing non-Secwépemc-speakers with fluent-Secwépemc-speakers. Williams Lake First Nation sees this revival as essential to their culture as language is a key part of the culture and the Secwépemc words and tones communicate the importance of nature and family in a manner much deeper than English allows (WLFN, 2021a).

The 2016 Census provides information about language characteristics for both of Canada's official languages as well as Indigenous language for the portion of the Williams Lake First Nation population living on-reserve (Table 7.16-5). In terms of official languages, English was spoken by all members and French by none. Forty-five of the 190 respondents spoke Indigenous languages, with similar numbers of males and females speaking indigenous languages. Approximately 10% of individuals learned an Indigenous language as their first language, and approximately 10% spoke an Indigenous language at home.

Table 7.16-5 Williams Lake First Nation Language Characteristics, 2016

Language Characteristics	Total	Male	Female
Language Knowledge	190	100	95
Indigenous language(s)	45	25	20
English only	190	95	95
French only	0	0	0
English and French	0	0	0
Other	0	10	0
Indigenous languages first learned (%)	10.5	10	10.5
Indigenous language spoken at home (%)	10.5	10	15.8
Knowledge of Indigenous language (%)	23.7	25	21.1

Source: Government of Canada, 2016 - Indigenous and Northern Affairs Canada, First Nation Detail, Williams Lake First Nation, Language

7.16.3.3.2 Governance

The following section provides context regarding the governance of the Williams Lake First Nation and its connection to the Secwépemc.

The Secwépemc governance system was complex and intimately linked to the land, resources, and people (Landmark, 2021). Families interacted within the band, Bands interacted within the nation, and nations interacted through regional trade and protocol agreements (WLFN, 2021a). The Secwépemc Nation was traditionally a self-governing people united by the Secwépemctsín language, culture, and belief system. The bands operated separately and independently from each other; however, the nation worked together as a political alliance that regulated use of the land and resources and protected their territories (Xatśūll, 2021a).

7.16.3.3.2.1 Family

The family was the basic unit within the Secwépemc governance system. Families were the source of Indigenous Knowledge/Traditional Land Use knowledge, which was passed on orally to the next generation. Heads of families were often given responsibility for resources, especially resources that they had close ancestral ties to or knowledge of. Access to resources and protocol alliances were gained through inter-tribal marriages (WLFN, 2021a).

7.16.3.3.2.2 Band

The political organization of Secwépemc consisted of small Bands or groupings of villages that were connected by habitat, interests, customs, values, religion, and language (LeBourdais 2009: p.6 as cited in Landmark, 2021). Membership in Bands was flexible, and Bands consisted of a network of extended families and households pursuing the same subsistence pattern (LeBourdais 2009 as cited in Landmark, 2021).

Historically, the leadership of each Secwépemc band was shared among a number of Chiefs and caretakers. Each Band had a Chief who was responsible for the general well-being of the community and acted as a spokesperson to outside visitors (LeBourdais, 2009 as cited in Landmark, 2021). The hereditary Chief, who was counselled by a group of Elders, was responsible for governing the

community (LeBourdais, 2009 as cited in Landmark, 2021). Other Chiefs or caretakers were appointed and were responsible for the caretaking of certain resources based on their areas of expertise (e.g., fish, game, plant resources, and trails) (Ignace, 2008; LeBourdais, 2009 as cited in Landmark, 2021).

7.16.3.3.2.3 Nation

The Nation functioned as a confederated political entity with representation from each community (Ignace, 2008; LeBourdais, 2009 as cited in Landmark, 2021). The Secwépemc Nation was well defined in terms of its boundaries and the laws which governed who could use resources within its boundaries (LeBourdais, 2009 as cited in Landmark, 2021).

7.16.3.3.2.4 Contemporary Governance

Today, Williams Lake First Nation is an *Indian Act* band governed exclusively by the Chief and Council it elects in accordance with the *Indian Act*. Williams Lake First Nation is culturally-related to the broader Secwépemc but is a distinct Indigenous Nation with authority to consult and make decisions about its title, rights and interests in its Traditional Territory.

7.16.3.3.3 Stewardship

Stewardship over Secwépemcúĺecw is a central value of Secwépemc society. Secwépemc resource gatherers actively managed their environments to ensure predictable and abundant sources of the plant and animal species they relied on for food, medicine, and material manufacturing. Not only was stewardship motivated by economic security but also by "*deeply embedded spiritual beliefs and values about respect for living things and thus about the need to look after resources*" (Ignace and Ignace, 2017 as cited in Landmark, 2021). Examples of management regimes used by the Secwépemc include burning pest plants, tilling the soil with digging sticks, weeding root-digging areas, trench digging, and grooming plants after gathering from them (Landmark, 2021).

These principles of environmental stewardship were traditionally encoded in the governance structure of Secwépemc peoples, and certain individuals functioned as appointed resource caretakers. These individuals undertook activities such as monitoring the health of root-producing areas, berry patches, and medicinal plant patches throughout the seasonal round, taking care of trails, assessing the quality and quantity of a particular resource at known locations or taking stock of the health and proclivity of salmon and game populations (Landmark, 2021).

Before Europeans came to the area, the Secwépemc occupied all of Secwépemcúĺecw – their traditional territory. A network of seasonal (temporary) camps and village sites, the location of which was based on the availability of resources, surrounded permanent winter villages. The seasonal round involved movement between hunting, fishing, plant harvesting, and ceremonial and trading sites and supported the interconnectedness with and stewardship of the land, people, and resources of the territory. The traditional Secwépemc calendar is guided by the cycles in nature and the name of each month corresponds to the activity carried out during that time of the year or the characteristics of the land, nature, and weather as described in Table 7.16-6.

Table 7.16-6 Secwepemc Calendar

Month	Secwépemctsín	Activity Carried Out
November	Pellc7éll7úllcwten	Entering Winter Homes Moon
December	Pellctíteq̓em	First Real Cold and Cross Over Moon
January	Pellkwét̓min	Sewing and Tanning Moon
February	Pesqépts	Chinook Winds Moon
March	Pesxúxem	Thawing and Melting Moon
April	Pelltsek̓úlecwten	Root Digging and Longer Daylight Moon
May	Pellcwéẁlemten	Lake Fishing Moon
June	Pesxqéltemc	Go to Higher Levels Moon
July	Pestémllik	Ripening Moon
August	Pellt̓éxelcten	Salmon Coming Up Moon
September	Pellctsíkenten	Cache Food Moon
October	Pesllwélsten	Fall Moon

Source: WLFN, 2021a.

Examples of environmental stewardship currently practiced include community members tending to refrain from hunting during springtime to allow females to raise their young (KK03, KK04, Landmark, 2021) or restricting their hunting year-round and avoiding female moose and caribou in particular to encourage their recovery.

Through their activities and relationship with the land and others in the territory, the Secwépemc enjoyed a life where the resources of their traditional territory provided for their needs. Although the land-use patterns have been disrupted and the territory affected by contact, Williams Lake First Nation members continue to use their traditional territory for a variety of cultural and subsistence activities (WLFN, 2021a).

7.16.3.3.4 Customs, Beliefs, and Values

Secwépemc worldview, knowledge system, and education are based on the principle of interconnectedness and reciprocal relationship with, and respect for, the natural world. For Secwépemc, food, medicine, technology, social and political organization, kinship, and spirituality are intimately interconnected and interdependent with the land (Billy, 2009 as cited in Landmark, 2021). Williams Lake First Nation considers all environmental features in the traditional territory sacred (Landmark, 2021).

In the Secwépemc worldview, all things possess a soul, and when an animal or plant is harvested, the belief is that the animal or plant decides to surrender its body to the hunter, fisher, or gatherer as a gift of life (LeBourdais, 2009: p.10 as cited in Landmark, 2021). Harvesting with intention through care, love, and a good heart guides many Secwépemc spiritual, sharing, and land-use practices, and the intention carries along the entire “chain of custody” (i.e., processing, preparing, food) and has lasting benefits on physiological and mental health, and on Mother Earth (Landmark, 2021).

Secwépemc belief and knowledge systems, values, and their inter-generational transmission are the basis of the Secwépemc way of life and its continuity. The health of the land and the health of the people are irrevocably connected. Transmitted values and ethics in relation to experience and practice, passed down over time, inform expectations for the health and quality of lands and resources, and guide land use practices, land user decision-making, and related harvesting protocols (Landmark, 2021).

7.16.3.3.4.1 Fish

Fish of cultural use and value are described in Table 7.16-7 and include Chinook and Sockeye Salmon; other fish species identified include Burbot, Char, Lingcod, Sturgeon, Dolly Varden, Rainbow Trout, and Suckers. Changes to fish populations, in particular, salmon, have been decreasing, including those populations in the Fraser River and Quesnel River. Water quality concerns are also noted for Quesnel Lake, Quesnel River, Fraser River, Williams Lake, and Jack of Clubs Lake and the contamination of fish. August is considered Pesqelqlélten or “Many salmon months” in reference to Sockeye salmon fishing in the Fraser River.

Table 7.16-7 Fish Species of Cultural Interest – Williams Lake First Nation

Williams Lake First Nation	
Species Name	**Scientific Name**
Burbot	*Lota lota*
Char	*Salvelinus alpinus*
Sockeye Salmon (Kokanee)	*Oncorhynchus nerka*
Lingcod	*Phiodon elongatus*
Chinook Salmon (spring salmon)	*Oncorhynchus tshawytscha*
Sturgeon	*Acipenser transmontanus*
Dolly Varden	*Salvelinus malma*
Sockeye Salmon (Kokanee)	*Oncorhynchus nerka*
Suckers	*Catostomidae sp.*
Rainbow Trout	*Oncorhynchus mykiss*

7.16.3.3.4.2 Wildlife

There are several species of Indigenous cultural use and value and Indigenous knowledge in Williams Lake First Nation culture. This is shown in Table 7.16-8.

Table 7.16-8 Wildlife Species of Cultural Interest – Williams Lake First Nation

Wildlife Species	Williams Lake First Nation		
	Food Source	Cultural Significance	Hunting and Trapping
Marten			✓
Deer	✓		
Moose	✓	✓	
Beaver	✓		✓
Caribou	✓	✓	
Elk	✓	✓	
Black Bear	✓		✓
Geese	✓		
Grizzly Bear	✓		✓
Grouse	✓	✓	
Muskrat			✓
Rabbit			✓
Fisher			✓

7.16.3.3.4.3 Plant Species of Cultural Significance

Based on the Xatśūll First Nation and Williams Lake First Nation TLUOS, the study area's vegetation supports habitat and food sources for significant wildlife species of interest as well as providing food, ceremonial and medicinal plants for both Nations. As Xatśūll First Nation and Williams Lake First Nation make broad use of their traditional territory for their subsistence activities and livelihoods, harvesting of vegetation remains an important aspect of both Nations' physical, social and emotional well-being. Subsistence activities (which include the harvesting and traditional use of plants) continue to ensure spiritual wellbeing, facilitate intergenerational knowledge transfer and language learning, and strengthen social ties.

Four Williams Lake First Nation subsistence sites related to vegetation (i.e., collecting berries/plants) were documented in the Traditional Land Use Study (TLUS) in addition to one from a previous study (hunting/berry-picking/medicinal plants). Contemporary subsistence sites identified in this study are located near Maud Lake for collecting saskatoons, west of Nyland Lake for devil's club, and around Yanks Peak for balsam bark.

Previous studies indicate that spruce bark, balsam bark, cedar bark/roots, and devil's club are also collected within the Yanks Peak and Keithley Creek area, as well as huckleberries near Kangaroo Mountain. A broad subsistence area encompassing an area west of the study area, from Likely Road in the southwest to Hendrix Lake in the southeast to the Cariboo Mountains in the northeast to Sovereign Mountain in the northwest, was also previously identified.

Industrial contamination of the local environment has created a reluctance for Indigenous nation members to harvest plants in certain areas near the active mine sites as well as areas near the sides of roads.

A summary of these findings can be found in Section 7.7 Vegetation.

7.16.3.3.5 Knowledge Transfer

Traditionally, Secwépemc knowledge was, and continues to be, acquired, maintained, and transmitted through symbolic and oral tradition, including language, songs, dances, stories, rituals, ceremonies, and practical activities. Storytelling, in particular, has been an important component of Secwépemc teachings. Traditional stories, or stsptekwle, included the history, landforms, cultural practices, and beliefs of Secwépemc and were used to pass on cultural, biological, and historical information; to teach lessons and instil morality, or simply to entertain. Examples of ways in which knowledge is transferred are as follows:

- Camping and gathering sites throughout the traditional territory are used as a means of community bonding and transmission of cultural traditions and as a base for other Traditional Land Use activities. Both short- and long-term habitation areas have served as a base for access to culturally significant places for many generations (TLUOS).
- Subsistence activities continue to ensure spiritual wellbeing, facilitate intergenerational knowledge transfer and language learning, and strengthen social ties. For example, hunting trips offer an opportunity for Elders to share not only the practical skills of hunting but also place names, knowledge of the landscape, and cultural protocols about when and when not to harvest (TLUOS).
- The seasonal cycles of the salmon run, migration of wildlife, ripening of berries, and climate were key to the traditional knowledge and survival of the Secwépemc and are recorded on the landscape through place names, stories and legends and passed on through families by oral tradition (WLFN, 2021a).

7.16.3.3.6 Cultural Practices and Community Health

Williams Lake First Nation makes broad use of their traditional territory for their subsistence activities and livelihoods. Traditional foods, and the activities associated with them (e.g., hunting, gathering, and fishing), continue to be important aspects of Williams Lake First Nation's physical, social, and emotional well-being.

As discussed in the TLUS, Williams Lake First Nation's well-being is tied to their ability to carry out sociocultural activities, practices, and pursuits, including land use activities within their traditional territories. Participation in social and cultural activities in places used for generations as part of their traditional territory promotes intergenerational transmission of culture, language, and knowledge from Elders to younger generations. It is particularly important for social cohesion and instilling: respect for the land; the respectful practice of land use activities for the management of resources; beliefs, norms and values; and customs and protocols around land use. Plants, animals, and places within the study area are tied to Secwépemctsín as community members gather and experience the features of the territory together. Having the ability to exercise, retain, and renew cultural traditions and practices together, and in relationship with the surrounding territory, is vital to the health, well-being, identity, and continuity of Williams Lake First Nation and Secwépemc (Landmark, 2021).

The land also provides many plants and animals essential to personal and, in turn, community health, including:

- Huckleberries (which are referred to as “the real Cariboo gold”) and blueberries provide nourishment and cultural and health benefits;
- Soopolallie (sxusem), contains important antioxidant, anti-inflammatory, and anti-proliferative properties. The fresh berries are used to make “Indian Ice Cream” or fresh juice, and parts of the plant can also be used to make medicinal tea;
- Balsam bark (melénllp) contains medicinal and antiseptic properties;
- Devil’s club (kets'e7éllp), one of the most common and potent medicinal plants used among the Nations; and
- Kekésu7 (chinook) and sqlelten7úwi (sockeye) salmon continue to be a key part of the Nations’ social, physical, and emotional well-being.

Over time, there has been an increasing presence of non-Indigenous harvesters in their traditional territory. This causes competition for subsistence resources, diminishes safe and reliable use of the land for cultural activities and harvesting, and, in some instances, can result in confrontations. This can also result in people having to travel long distances to secure the items or in them not being available when needed (Landmark, 2021).

7.16.3.4 Xatśūll First Nation

7.16.3.4.1 Cultural History

For thousands of years, Northern Secwépemc people lived in semi-permanent villages in the winter and travelled on the land in a seasonal round between hunting, fishing, plant harvesting, ceremonial, and trading sites (WLFN, 2021a) in the warmer months. Until the early 1800s, the Secwépemc were the only inhabitants of their traditional territory and lived in relative peace and harmony with neighbouring Nations (Billy, 2009 as cited in Landmark, 2021). From the arrival of the first non-Indigenous people in 1793 to today, there have been a number of events that have affected the culture and identity of the Secwepemc people, including Xatśūll First Nation. These events, as discussed in the TLUOS, are the fur trade, the gold rush and settler colonialism, assimilation and Indian Reserves, epidemics, and missionaries and residential schools.

7.16.3.4.1.1 Fur Trade

Alexander Mackenzie of the North West Company arrived in Secwépemcúĺecw in 1793, and by 1808 Simon Fraser was in northern Secwépemc territory and relying on Indigenous Knowledge in his search for a navigable route to the Pacific (Teit, 1909 as cited in Landmark, 2021). Traders began developing trading posts in 1811, and, over time, these were consolidated and then taken over by the Hudson’s Bay Company in 1821 (Coffey et al., 1990 as cited in Landmark, 2021).

The relationship between Secwépemc and the fur traders was initially mutually beneficial and peaceful (Coffey et al. 1990 as cited in Landmark, 2021) as Secwépemc were able to control their involvement in the trade and because non-Indigenous traders relied on Secwépemc Indigenous Knowledge and territory to help maintain the posts (LeBourdais, 2009 as cited in Landmark, 2021). However, within ten years, major changes started to occur across Secwépemcúĺecw as beaver, and big game animals

declined rapidly, competition for trapping areas led neighbouring Nations to establish boundaries between their territories, and the Secwépemc society and family structure changed (Coffey et al., 1990; Billy, 2009 as cited in Landmark, 2021) as the mixing of cultures affected the beliefs, customs, and values of Secwépemc society.

As beaver declined, salmon became the key trading item. The subsequent reduction in salmon, and the decreased success in trapping, led to the first of a number of periods of starvation (Coffey et al., 1990 as cited in Landmark, 2021). The relationship between the traders and Secwépemc eventually turned to open hostility, and as the fur trade was ending and Secwépemc life had undergone a significant change, mining came to Secwépemcúĺecw (Landmark, 2021).

7.16.3.4.1.2 Gold Rush and Settler Colonialism

The gold rush increased the effects of settler colonialism on Secwépemc's traditional life and lands. Oral histories and written sources show that Secwépemc knew that there was gold on their land before the non-Indigenous miners arrived (Coffey et al., 1990 as cited in Landmark, 2021). The arrival of miners on Secwépemc territory led to conflict as miners and Secwépemc clashed over gold and food supplies (Coffey et al., 1990 as cited in Landmark, 2021). However, records indicate that Secwépemc was again essential to the survival of the miners as Secwépemc communities traded with them, provided them with food and goods, and acted as guides and translators (Cariboo Chilcotin Coast Tourism Associations, 2020 as cited in Landmark, 2021).

Within the settler society, the appointment of James Douglas as the first Governor of the Colony of British Columbia in 1858 represented a transition of colonial interest from the fur trade to settlement (Fisher, 1977).

7.16.3.4.1.3 Assimilation and Indian Reserves

By the late 1850s, Douglas maintained that the Indigenous peoples should be assimilated and provided with enough land to allow them to support themselves while they adjusted to "civilized life" (Harris, 2012 as cited in Landmark, 2021). Douglas' successor changed this position, and smaller amounts of land were set aside for the Indigenous people (Trutch, 1867: p. 42 as cited in Landmark, 2021). While pre-emptions were not allowed on Indian reserves, this was not always followed.

The loss of land and resources resulted in starvation and marginalization of Secwépemc, and the influx of non-Indigenous people onto Secwépemc territory had drastic impacts on Secwépemc land and life (Landmark, 2021).

7.16.3.4.1.4 Epidemics

Non-Indigenous presence also brought disease and epidemics, which resulted in the loss of many elders and, along with that, many centuries of accumulated oral history, skills, and knowledge. This made the Shuswap less able to defend their lands and their culture from a permanent change at the hands of newcomers. The death of their young challenged the very survival of the Shuswap people (Coffey et al., 1990 as cited in Landmark, 2021).

7.16.3.4.1.5 Missionaries and Residential Schools

Part of the forced Indigenous assimilation process involved placing Indigenous children in non-Indigenous educational systems. Prior to the 1876 *Indian Act*, this meant missionaries were teaching at day schools on reserves. The schools were replaced by two residential schools in the Cariboo Region: Kamloops Residential School and Cariboo Indian Residential School (St. Joseph's Mission Residential School) Sellars, 2013 as cited in Landmark, 2021). St. Joseph's Mission Residential School operated until 1981 (Story, 2005 as cited in Landmark, 2021).

The effects of residential schools continue to be experienced in Indigenous communities (Sellars, 2013 as cited in Landmark, 2021). However, Secwépemc culture, identity, and land use practices have shown strength and resilience in spite of colonial land appropriation and environmental degradation (Landmark, 2021).

7.16.3.4.1.6 Language

According to Secwépemc oral history, Secwépemctsín (the language of the Secwépemc) was given to the people by the Creator and his helpers Old One and Sek'lep (Coyote) for communication with the natural world. For Secwépemc, Secwépemctsín is not only a mode of communication but also a way of being and a way of life.

Secwépemctsín contains the cultural, ecological, and historical knowledge, which includes values, beliefs, rituals, songs, stories, social and political structures and spirituality of the people. It contains the mental, physical, and spiritual connectedness of the Secwépemc to the land and maintains their responsibility to the land. It keeps the people whole and connected to the Creator. The language contains traditional ecological knowledge needed to protect biodiversity. This knowledge passed down through generations orally contains the teachings necessary to maintain Secwépemc culture and identity (First Voices).

Secwépemctsín is an Interior Salish language. The Secwépemctsín sound system consists of 43 consonants and five vowels. Many of these sounds are not found in the English language and are difficult to learn. Until about 45 years ago, Secwépemctsín was an oral language. A writing system was developed for Secwépemctsín but is not accurate as the vowel sounds do not represent the Secwépemc sounds accurately (First Voices).

Residential schools and the "Sixties Scoop" resulted in a break in the vital connection of language to oral tradition practice. Increasing Secwépemc scholarship and grassroots initiatives are advocating for and implementing Secwépemctsín language revitalization projects, both in and out of communities.

Today, Xatśūll First Nation is working to revive its traditional language and provide various opportunities to youth and other members to learn Secwépemctsín.

The 2016 Census provides information about language characteristics for both of Canada's official languages as well as Indigenous language for the portion of the Xatśūll First Nation population living on-reserve (Table 7.16-9). In terms of official languages, English was spoken by all members and French by none. Forty-five of the 190 respondents spoke Indigenous languages, with more males than females speaking indigenous languages. Approximately 30% of individuals learned an Indigenous language as their first language, and approximately 10% spoke an Indigenous language at home, with more females than males speaking at home.

Table 7.16-9 Xatśūll First Nation Language Characteristics, 2016

Language Characteristics	Total	Male	Female
Language Knowledge	150	80	70
Indigenous language(s)	45	30	15
English only	150	80	70
French only	0	0	0
English and French	0	0	0
Other	0	0	0
Indigenous languages first learned (%)	30	31.3	21.4
Indigenous language spoken at home (%)	10	12.5	14.3
Knowledge of Indigenous language (%)	30	37.5	21.4

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The family was the basic unit within the Secwépemc governance system. Families were the source of Indigenous Knowledge/Traditional Land Use knowledge, which was passed on orally to the next generation. Heads of families were often given responsibility for resources, especially resources that they had close ancestral ties to or knowledge of. Access to resources and protocol alliances were gained through inter-tribal marriages (WLFN, 2021a).

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corresponds to the activity carried out during that time of the year or the characteristics of the land, nature and weather as described in Table 7.16-10.

Table 7.16-10 Secwepemc Calendar

Month	Secwépemctsín	Activity Carried Out
November	Pellc7éll7úllcwten	Entering Winter Homes Moon
December	Pellctíteq̓em	First Real Cold and Cross Over Moon
January	Pellkwét̓min	Sewing and Tanning Moon
February	Pesqépts	Chinook Winds Moon
March	Pesxúxem	Thawing and Melting Moon
April	Pelltsek̓úlecwten	Root Digging and Longer Daylight Moon
May	Pellcwéẃlemten	Lake Fishing Moon
June	Pesxqéltemc	Go to Higher Levels Moon
July	Pestémllik	Ripening Moon
August	Pellt̓éxelcten	Salmon Coming Up Moon
September	Pellctsíkenten	Cache Food Moon
October	Pesllwélsten	Fall Moon

Source: WLFN, 2021a

Examples of environmental stewardship currently practiced include community members tending to refrain from hunting during springtime to allow females to raise their young (KK03, KK04, Landmark, 2021) or restricting their hunting year-round and avoiding female moose and caribou in particular to encourage their recovery.

Through their activities and relationship with the land and others in the territory, the Secwépemc enjoyed a life where the resources of their traditional territory provided for their needs. Today. Although the land-use patterns have been disrupted and the territory and community affected by contact, the people of Xatśūll First Nation have maintained a strong connection to their land and culture and continue to push forward toward a promising future (Xatśūll, 2021a).

7.16.3.4.4 Customs, Beliefs, and Values

Secwépemc worldview, knowledge system, and education are based on the principle of interconnectedness and reciprocal relationship with, and respect for, the natural world. For Secwépemc, food, medicine, technology, social and political organization, kinship, and spirituality are intimately interconnected and interdependent with the land (Billy, 2009 as cited in Landmark, 2021).

In the Secwépemc worldview, all things possess a soul, and when an animal or plant is harvested, the belief is that the animal or plant decides to surrender its body to the hunter, fisher, or gatherer as a gift of life (LeBourdais, 2009: p.10 as cited in Landmark, 2021). Harvesting with intention through care, love, and a good heart guides many Secwépemc spiritual, sharing, and land-use practices, and the intention carries along the entire “chain of custody” (i.e., processing, preparing, food) and has lasting benefits on physiological and mental health, and on Mother Earth (Landmark, 2021).

Secwépemc belief and knowledge systems, values, and their inter-generational transmission are the basis of the Secwépemc way of life and its continuity. The health of the land and the health of the people are irrevocably connected. Transmitted values and ethics in relation to experience and practice, passed down over time, inform expectations for the health and quality of lands and resources, and guide land use practices, land user decision-making, and related harvesting protocols (Landmark, 2021).

7.16.3.4.4.1 Fish

Fish of cultural use and value are described in Table 7.16-11 and include Chinook and Sockeye salmon; other fish species identified include Burbot, char, Lingcod, sturgeon, Dolly Varden, Rainbow Trout, and suckers. Changes to fish populations, in particular, salmon, have been decreasing, including those populations in the Fraser River and Quesnel River. Water quality concerns are also noted for Quesnel Lake, the Quesnel River, the Fraser River, Williams Lake, and Jack of Clubs Lake and the contamination of fish. August is considered Pesqelqlélten or “Many salmon months’ in reference to Sockeye salmon fishing in the Fraser River.

Table 7.16-11 Fish Species of Cultural Interest – Xatśūll First Nation

Species Name	Xatśūll First Nation
	Scientific Name
Burbot	*Lota lota*
Char	*Salvelinus alpinus*
Sockeye Salmon (Kokanee)	*Oncorhynchus nerka*
Lingcod	*Phiodon elongatus*
Chinook Salmon (spring salmon)	*Oncorhynchus tshawytscha*
Sturgeon	*Acipenser transmontanus*
Dolly Varden	*Salvelinus malma*
Sockeye Salmon (Kokanee)	*Oncorhynchus nerka*
Suckers	*Catostomidae sp.*
Rainbow Trout	*Oncorhynchus mykiss*

7.16.3.4.4.2 Wildlife

There are several species of Indigenous cultural use and value and Indigenous knowledge in Xatśūll First Nation culture. This is shown in Table 7.16-12.

Table 7.16-12 Wildlife Species of Cultural Interest – Xatśūll First Nation

Wildlife Species	Xatśūll First Nation		
	Food Source	Cultural Significance	Hunting and Trapping
Marten			✓
Deer	✓		
Moose	✓	✓	
Beaver	✓		✓
Caribou	✓	✓	
Elk	✓	✓	
Black Bear	✓		✓
Geese	✓		
Grizzly Bear	✓		✓
Grouse	✓	✓	
Muskrat			✓
Rabbit			✓
Fisher			✓

7.16.3.4.4.3 Plant Species of Cultural Significance

Based on the Xatśūll First Nation and Williams Lake First Nation TLUS, the Study Area's vegetation supports habitat and food sources for significant wildlife species of interest as well as providing food, ceremonial and medicinal plants for both Nations. As Xatśūll First Nation and Williams Lake First Nation make broad use of their traditional territory for their subsistence activities and livelihoods, harvesting of vegetation remains an important aspect of both Nations' physical, social, and emotional well-being. Subsistence activities (which include the harvesting and traditional use of plants) continue to ensure spiritual wellbeing, facilitate intergenerational knowledge transfer and language learning, and strengthen social ties.

Five Xatśūll First Nation subsistence sites related to vegetation (i.e., collecting berries/plants) were identified in the TLUS and one from a previous study (Firelight Group and Xatśūll First Nation, 2012 and 2019). Berries, medicinal plants, and bark are said to be found in abundance near Wells and Barkerville. Berries including soopolallie (*Shepherdia canadensis*), highbush cranberry (*Viburnum edule*) and huckleberry (*Vaccinium spp.)* are found near Stanley Creek Road, Lightening Creek Road, and areas toward the Bowron Lakes. Huckleberries and blueberries (*Vaccinium spp*.) remain an important resource for both Nations as they provide nourishment and cultural and health benefits. Soopolallie is highly valued by Xatśūll First Nation and Williams Lake First Nation and contains important antioxidant, anti-inflammatory, and anti-proliferative properties. The fresh berries are used to make "Indian Ice Cream" or fresh juice, and parts of the plant can also be used to make medicinal tea. Moreover, saskatoon berries (*Amelanchier alnifolia*), raspberries (*Rubus idaeus ssp. strigosus*), balsam

(*Abies lasiocarpa*) bark, cedar (*Thuja spp*.), and devil's club are collected along an access route that connects Ghost Lake to Wells. Balsam bark contains medicinal and antiseptic properties, while cedar bark is used for making traditional baskets, and devil's club is one of the most common and potent medicinal plants used among the Nations.

Previous studies indicate that spruce bark, balsam bark, cedar bark/roots, and devil's club are also collected within the Yanks Peak and Keithley Creek area, as well as huckleberries near Kangaroo Mountain. A broad subsistence area encompassing an area west of the study area, from Likely Road in the southwest to Hendrix Lake in the southeast to Cariboo Mountains in the northeast to Sovereign Mountain in the northwest, was also previously identified.

Industrial contamination of the local environment has created a reluctance for Indigenous Nations members to harvest plants in certain areas near the active mine sites as well as areas near the sides of roads.

A summary of these findings can be found in Section 7.7 Vegetation.

7.16.3.4.5 Knowledge Transfer

Traditionally, Secwépemc knowledge was, and continues to be, acquired, maintained, and transmitted through symbolic and oral tradition, including language, songs, dances, stories, rituals, ceremonies, and practical activities. Storytelling, in particular, has been an important component of Secwépemc teachings. Traditional stories, or stsptekwle, included the history, landforms, cultural practices, and beliefs of Secwépemc, and were used to pass on cultural, biological, and historical information; to teach lessons and instil morality, or simply to entertain. Examples of ways in which knowledge is transferred are as follows:

- Camping and gathering sites throughout the traditional territory are used as a means of community bonding and transmission of cultural traditions and as a base for other TLU activities. Both short- and long-term habitation areas have served as a base for access to culturally significant places for many generations (TLUOS).
- Subsistence activities continue to ensure spiritual wellbeing, facilitate intergenerational knowledge transfer and language learning, and strengthen social ties. For example, hunting trips offer an opportunity for Elders to share not only the practical skills of hunting but also place names, knowledge of the landscape, and cultural protocols about when and when not to harvest (TLUOS).
- Named places facilitate the transfer of information related to a site's cultural significance to younger generations.

7.16.3.4.6 Cultural Practices and Community Health

Xatśūll First Nation makes broad use of their traditional territory for their subsistence activities and livelihoods. Traditional foods, and the activities associated with them (e.g., hunting, gathering, and fishing), continue to be important aspects of Xatśūll First Nation's physical, social, and emotional well-being.

As discussed in the TLUOS, Xatśūll First Nation's well-being is tied to their ability to carry out sociocultural activities, practices, and pursuits, including land use activities within their traditional territories. Participation in social and cultural activities in places used for generations as part of their traditional territory promotes intergenerational transmission of culture, language, and knowledge from Elders to younger generations. It is particularly important for social cohesion and instilling: respect for the land, respectful practice of land use activities for the management of resources, beliefs, norms and values, and customs and protocols around land use. Plants, animals, and places within the study area are tied to Secwépemctsín as community members gather and experience the features of the territory together. Having the ability to exercise, retain, and renew cultural traditions and practices together, and in relationship with the surrounding territory, is vital to the health, well-being, identity, and continuity of Xatśūll First Nation and Secwépemc (Landmark, 2021).

The land also provides many plants and animals essential to personal and, in turn, community health, including:

- Huckleberries (which are referred to as "the real Cariboo gold") and blueberries provide nourishment and cultural and health benefits.
- Soopolallie (sxusem), contains important antioxidant, anti-inflammatory, and anti-proliferative properties. The fresh berries are used to make "Indian Ice Cream" or fresh juice, and parts of the plant can also be used to make medicinal tea.
- Balsam bark (melénllp) contains medicinal and antiseptic properties.
- Devil's club (kets'e7éllp) is one of the most common and potent medicinal plants used among the Nations.
- Kekésu7 (chinook) and sqlelten7úwi (sockeye) salmon continue to be a key part of the Nations' social, physical, and emotional well-being.

Other plants and animals important to Xatśūll First Nation included mountain potato, Birch bark, roots, trout and saskatoon berries (Xatśūll, 2021a).

Over time, there has been an increasing presence of non-Indigenous harvesters in their traditional territory. This causes competition for subsistence resources, diminishes safe and reliable use of the land for cultural activities and harvesting, and, in some instances, can result in confrontations. This can result in people having to travel long distances to secure the items or in them not being available when needed (Landmark, 2021).

7.16.3.5 District of Wells

7.16.3.5.1 Cultural History and Identity

Settlement of the Cariboo region was driven by the gold rushes of the 1800s. In 1858, the discovery of gold along the Fraser River brought prospectors from all over the world to the region. People followed the Fraser River north and eventually reached the future location of Barkerville. The discovery of gold in 1861 in Williams Creek brought more people to the region, and in 1862, Barkerville was born due to its' namesake William "Billy" Barker's financial prosperity. In 1865, the Cariboo Wagon Road to Barkerville was completed, allowing for easier access to the region. By the mid-1860s, Barkerville had a population of 5,000 people, and with this population came their music, art, and culture. Barkerville's public library

was established as soon as a building was provided to house it, and the Cariboo Literary Society met regularly. The Cariboo Amateur Dramatic Society presented their first productions in a saloon until they had raised enough money to build the Theatre Royal.

Despite a fire destroying most of the town in 1868, Barkerville was quickly rebuilt. However, by the turn of the century, the town had declined, as most people had moved away after the end of the gold rush.

In the early 1920s, there were still people living in Barkerville, and at the future location of Wells, there was a small camp, a stopping house and a sawmill operation (Wells Historical Society, 2017). The Cariboo Gold Quartz Mining Company was established in 1926 by Fred Wells with Dr. William Burnett and O.H. Solibakke. The Cariboo Gold Quartz Mine was one of two mining companies in the area and developed a mine at the end of Jack of Clubs Lake. The other company, Island Mountain Mine, was also operating in the Wells area.

The community of Wells was established in 1933 as a company town for the Cariboo Gold Quartz Mining Company. It was named after Fred Wells, one of the founders of the Cariboo Gold Quartz Mine. In 1933, the Cariboo Gold Quartz Mining Company formed a subsidiary called the Wells Townsite Company Limited to purchase, develop and sell land for Wells. The Wells Townsite Company sought to provide water and electrical services, a structured town layout with streets and sidewalks, and telephones. They encouraged the relocation of whole families to Wells. The Wells Townsite Company planned, built, and maintained Wells, and by 1934, 40 buildings were completed in the town.

In the 1930s, people once again came to the Cariboo region as part of the second gold rush. People from various backgrounds, including those of Chinese, Scandinavian, American, and Irish descent, travelled to Wells to seek out well-paying mining jobs and to escape the effects of the Great Depression. The population of Wells swelled during this time to 4,500 residents.

Wells boasted tennis courts, a golf course, two racetracks, baseball diamonds, a curling rink, a hockey rink, and a ski slope with a ski jump on Cow Mountain. Residents of Wells participated in a variety of winter sports, including hockey, badminton, curling, skiing, snowshoeing, dog sledding, and ice fishing. Two hockey teams, one from each of the mines, played against each other. Curling was also a very popular activity in Wells. Popular summer sports included baseball, basketball, tennis, golf, horse racing, hiking, fishing, and hunting.

The Cariboo Gold Quartz Mine began successful production in January 1933. Underground development almost tripled by 1935 and with additional construction, production capacity was increased to 200 tons of ore per day. Both the Cariboo Gold Quartz Mine and the Island Mountain Mine were in production through the 1930s and 1940s; however, production started to slow after the end of World War II. As the mines began to face difficulties due to the fixed price of gold, workers started to leave to find jobs elsewhere. The Cariboo Gold Quartz Mining Company bought the Island Mountain Mining Company in 1954 and renamed it the Aurum Mine. The mining company did not find success again and closed for good in 1967.

When the Cariboo Gold Quartz Mine closed in 1967, many people moved away and the population required to sustain employment in Wells declined. The Wells Townsite Company continued to operate until 1967. Townsite housing was sold to private owners and the Community Hall was sold to the Wells Chamber of Commerce. The Hospital ceased operation and was also privately sold. The Wells school was taken over by the provincial government. The economy of Wells slowed in the 1960s and 1970s with the town dependent on a short tourism season and small logging operations. In the same decade, there was an influx of a younger generation, which led to a thriving arts scene in Wells.

In the 1980s, the price of gold increased, resulting in an uptake in mining activities at Mosquito Creek with the establishment of the Mosquito Creek Mine. This resulted in more people moving to Wells to commute to the mine. There were also fly-in-fly-out workers. Locals worked at the mine as well, which lasted three-to-four years. Though there were benefits from Mosquito Creek Mine, there was limited mining activity in the region from the 1980s onwards, and residents in Wells were supported by jobs in tourism and the development of the arts community.

The Wells Improvement District was formed in 1967, which operated under the Cariboo Regional District and managed the day-to-day operations of the Town. The Town voted to incorporate as a municipality in 1997 and the first mayor and councillors of Wells were elected in June 1998. The inauguration of the District of Wells was held on June 29, 1998.

7.16.3.5.2 Community

The District of Wells describes itself as a destination for history, art and adventure. Wells is the nearest municipality to both Barkerville and the Bowron Lakes, which are destinations for visitors to the Cariboo region.

Initially, Wells was planned to promote closeness of the community and to be more than just a company town. The community has a history of rallying around issues that are important to the residents of Wells. When the School District proposed closing the Wells-Barkerville school in 2002, the community came together to support the school and successfully lobbied to keep it open. The school has an inherent value to the community that is still present today. The community has also supported retaining the ambulance service and policing in Wells, along with the Community Hall and post office.

Divisive issues in Wells include the changing nature of Wells, support for tourism and arts, and lack of participation in community planning and volunteering. There is a perception in the community that there are separate groups with different agendas which often compete against each other. Another issue identified in Wells is the ability to have visitors stop in the community instead of just passing through to Barkerville or the Bowron Lakes.

7.16.3.5.2.1 Arts

The arts community developed in Wells in part by the establishment of Island Mountain Arts (IMA) in 1977 (IMA, n.d.). Island Mountain Arts is a non-profit society and began in 1977 with the School of Arts, which offered professional arts programs including ballet, music and visual arts. In 1988, IMA acquired the Hill Meat Market building and renovated it into a public gallery space and administrative offices. The building houses the Island Mountain Arts Public Gallery, which features monthly exhibitions, as well as a gift shop and IMA offices.

The Island Mountain Arts Public Gallery is open throughout the year and features exhibits by local and regional artists. The Gallery also provides year-round public events, which are free to the public. During the winter and summer months, IMA offers professional development opportunities with instructors for new and established artists. Classes of the Annual School of the Arts are held in the Wells-Barkerville School. Instructors have come from around the world and IMA draws 175 students annually.

In 2014, IMA took possession of a new property to provide accommodations for artists, instructors and staff as well as provide an Artist-in-Residence Program. Future development plans include more studio spaces to provide additional opportunities for artists.

The Amazing Space Studio and Gallery operated in Wells from 1995 to 2020, showcasing art from local artists. In 2021, the studio was renamed Sarras and will operate as a music studio.

7.16.3.5.2.2 Theatre

The Sunset Theatre was built as a movie theatre in 1934 and has been a dance hall, gambling hall and morgue. It was operated as a movie theatre by the Wells Historical Society during the late 1970s and early 1980s. In 1999, the building was purchased and the 100-seat theatre was restored to offer professional live theatre, movies, and concerts. The theatre has two full dressing rooms, green room, concession, box office, costume and prop inventory and technical infrastructure.

The Sunset Theatre is a non-profit organization that was established in 2000 and has offered programing since 2006. Programs include year-round professional theatre, artist retreats, rentals, workshops, musical theatre boot camp and a film festival. The Sunset Theatre has presented over 65 professional theatre productions and their Exploration Series has supported 41 new plays and produced 12 new in-house plays.

7.16.3.5.2.3 Festivals

Wells is host to the ArtsWells Festival of All Things Art over the August long weekend which began in 2004. The festival includes musical performances over multiple stages, along with workshops, film screenings, roving performers, art displays and vendors. The four-day indoor and outdoor event takes place throughout the community of Wells and in 2015, over 2,200 artists, volunteers and festival goers attended the event. ArtsWells was last hosted in the community in 2019 and was a virtual event in 2020 due to COVID-19. The ArtsWells festival is very important to the community and is typically well attended.

7.16.3.5.2.4 Wells Historical Society

The Wells Historical Society is a non-profit organization dedicated to collecting, storing and displaying artifacts, photos, and stories of the history of Wells. The society was incorporated in 1972 and later established the Wells Museum in 1974 (Wells Historical Society, 2017). The Wells Historical Society maintains an archive of information, artifacts, photographs, and newspaper clippings related to Wells' past.

7.16.3.5.2.5 Cohesion

During the community interview process, a common theme that arose was that Wells is often not unified. Some have identified separate groups within the community, which can be based on economic standing, location within the community or general groups (such as artists, miners, and merchants). There are nine volunteer non-profit organizations in Wells, but there is no cohesiveness between these groups. There is a division between these groups and the population is divided on what they value. There is additionally division being caused by both COVID-19 and the proposed Project.

Having said that, there are a number of events and milestones that the Town is able to unify over. Community events, such as Remembrance Day at the Royal Canadian Legion, ODV's Christmas Party, the annual New Year's party, potlucks, events at the Sunset, curling, and activities at the pub unite the community as well. However, there are less events than there used to be, partially due to COVID-19. The community seems to be uniting over the need for tourism as well.

The community has also proven to unify when under duress or when the community is at risk of losing something that most value. In 1985, the ambulance service in Wells was set to be discontinued, but the community rallied to ensure that the service was maintained. Similarly, when the Royal Canadian Mounted Police was considering moving out of Wells, the community rallied to have them stay as well. In 2002, when the school board wanted to close the Wells-Barkerville School, the community fought for two years to keep it open. When Barkerville was on the verge of being sold, the community rallied around itself and developed the Barkerville Heritage Trust, which was done on a volunteer basis. The community has also rallied around keeping the community hall and post office. When there is a "us vs. them" mentality in the community, they can be united.

7.16.3.5.2.6 Community Character and Vision

Values in the community include maintaining Wells as a viable, quiet and safe place to live where everyone knows everyone. Some residents view it as a quaint mountain village where people can escape from city life. Residents of Wells want to see the community succeed and have a thriving arts and tourism industry, with Wells as a destination for visitors. Support for growth is present in the community, and there is a desire to see a balance between mining, arts and tourism. In addition, there is a desire to have more essentials available in Town so that the community is more complete. These essentials include banks, grocery stores, laundromats, and hardware stores. There are some who want to increase the town's population to 500 people, which could result in more businesses being sustained. There are some who also want nothing to change in the community.

Some residents want a strong economy based on tourism. They want well to be known as a destination instead of just a town on the way to Barkerville. Several businesses are based on tourism and require a tourism industry to survive, which includes having hotel accommodation available. Some want to promote the Town through Tourism BC. There have also been suggestions that the District of Wells needs a Marketing and Economic Development position to promote people stopping in Wells. There was also previously a paid coordinator for the nine volunteer non-profit organizations, but that role has been discontinued. Some people would like to see this role reinstated.

Related to tourism, some are unhappy about the Hubs and Whitecaps hotel purchases, noting that visitors now have nowhere to stay. There is a desire for visitor facilities and housing. There is also the belief that the cultural landscape in Wells is changing. It was also noted that there was a lack of community leadership. There is a belief that the same groups of individuals are the ones volunteering now, but some are giving up. Additionally, it was noted that individuals who were part of the ArtsWells festival are now gone and that other members of the community are leaving.

7.16.3.5.2.7 Promotion of Culture

There were several suggestions on how culture could be promoted in Wells. These included: support for IMA; heritage conservation in Wells (via provincial heritage designations); downtown revitalizations; community restoration; promotion of tourism; community events; cultural events; and more.

Tourism seems to be a key focus. As mentioned in earlier questions, there is a want to have Wells viewed as a destination instead of a town that is just passed through. This could be done through further collaboration with Tourism BC. There needs to be an increase in accommodation as well.

Wells lacks clear economic development and marketing leadership. It was suggested as well to have a paid Culture Coordinator for Wells, who would be responsible for writing grants and fostering collaboration between the non-profit and business community. It was noted as well that a Chamber of Commerce would be beneficial. It was noted as well that additional industries, such as the film industry, could also thrive in Wells.

It was noted as well that everyone in Wells – whether they know it or not – is connected to gold. This culture of gold can be emphasized more.

7.16.3.5.3 Cultural Practices and Community Health

Community health is promoted in several ways, including all-season outdoor recreation (hiking, skiing, snowboarding, snowmobiling, snowshoeing, etc.); water-based recreation (canoeing, kayaking, etc.); the arts (particularly the IMA and Sunset Theatre); the Wells School, the Legion; and cultural events.

7.16.4 Potential Effects

7.16.4.1 Methods

Key Project-related interactions with the Culture VC and associated subcomponents were determined through a screening evaluation of proposed Project components and activities within the LAA. Key Project-related interactions and the likelihood of interactions were determined by assessing linkages to other Valued Components such as Vegetation (7.7), Employment and Economy (7.10), Land and Resource Use (7.11), and Infrastructure and Services (7.12).

Based on the results of the screening evaluation, any possible interactions between the Project and the Culture VC subcomponents were carried forward in the assessment to determine the effects of the interaction on the Culture VC.

7.16.4.2 Valued Components, Assessment Endpoints, and Measurement Indicators

Table 7.16-13 is a summary of the Culture VC subcomponents carried forward into the assessment to evaluate potential effects to Culture, how they are to be measured and the assessment endpoint goals.

Table 7.16-13 Assessment Endpoints and Measurement Indicators for Culture

Sub-component	Primary Measurement Indicators	Assessment Endpoints
Plant Species of Cultural Significance	Loss or alteration to known occurrences of plants species of cultural significance. Loss or alteration of abundance or access to traditional use species by participating Indigenous nations. Increase in distribution and/or quantity of invasive plant species.	Maintenance of culturally significant landscape features, practices, and infrastructure
Traditional Foods	Direct Loss or alteration of abundance or access to traditional foods. Increase in competition for traditional foods and access to traditional foods. Impacts to wildlife that is traditionally consumed by Indigenous nations. Health effects to fish and wildlife sources, resulting in a reduction in consumption. Increase of non-indigenous hunters. Increase of non-indigenous harvesters.	
Indigenous Language and Teaching	Loss or alteration of opportunity for culturally significant practices, gatherings, and education. Dilution of Indigenous language within indigenous groups.	
District of Wells Art Sector	Alteration of opportunity for culturally significant gatherings and education. Alteration in the quantity of art and artists within the District of Wells. Loss of cultural acceptance felt by those in different industries (arts, mining, merchants).	

7.16.4.3 Project Interactions

Project components and activities have the potential to interact with and lead to effects on Culture. Interactions and potential effects are identified in Table 7.16-14.

Table 7.16-14 Potential Project Interactions - Culture

Project Component or Activity	Potential Interaction with Culture VC Subcomponents				Potential Effects
	Plant Species of Cultural Significance	Traditional Foods	Indigenous Language and Teachings	District of Wells Arts Sector	
Construction Phase					
Procurement of employment and labour, services, goods, and use of infrastructure in the region	-	-	X	X	Impact on availability of infrastructure for culturally significant gatherings. Economic stimulus. In-migration of non-Indigenous language speakers.
Land clearing, transformation, and compaction	X	X	-	-	Loss or alteration of plant species of cultural significant and traditional foods through landscape changes, vegetation removal, soil disturbances, fugitive dust, and introduction of invasive plants. Loss or alteration of availability and access to plant species of cultural significance and traditional foods from increased access, traffic, and competition.
Land clearing and site preparation for the Transmission Line	X	X	-	-	
Construction/installation of transmission line and ancillary structures, including access roads	X	X	-	-	
Road use during construction (transportation of workers, goods, equipment and machinery, and services)	X	X	-	-	
Progressive reclamation as opportunity arises	X	X	-	-	Opportunity to enhance availability and abundance of plant species of cultural significance and traditional foods.
Operations Phase					
Procurement of employment and labour, services, goods, and use of infrastructure in the region			X	X	Impact on availability of infrastructure for culturally significant gatherings. In-migration of non-Indigenous language speakers.
Operations of the Camp at the Mine Site Complex	-	-	X	X	

Project Component or Activity	Potential Interaction with Culture VC Subcomponents				Potential Effects
	Plant Species of Cultural Significance	Traditional Foods	Indigenous Language and Teachings	District of Wells Arts Sector	
Transmission line and ancillary structures operations and maintenance	X	X	-	-	Loss or alteration of plant species of cultural significant and traditional foods through landscape changes, vegetation removal, soil disturbances, fugitive dust, and introduction of invasive plants. Loss or alteration of availability and access to plant species of cultural significance and traditional foods from increased access, traffic, and competition.
Road use and maintenance (traffic from the transportation of workers, goods, equipment and machinery, and services on Mine Site and access roads)	X	X	-	-	
Progressive reclamation as opportunity arises	X	X	-	-	Availability and abundance of plant species of cultural significance and traditional foods.
Closure Phase					
Procurement of employment and labour, services, goods, and use of infrastructure in the region	-	-	X	X	Availability of infrastructure for culturally significant gatherings. In-migration of non-Indigenous language speakers. Increased population within the District of Wells.
Roads decommissioning, recontouring, and revegetation	X	X	-	-	Availability and abundance of plant species of cultural significance and traditional foods.

7.16.4.4 Discussion of Potential Effects

The following subsections describe the anticipated Project effects on subcomponents of the Culture VC for the effects assessment. The five types of Project effects described below may or may not apply to each subcomponent or Project Phase. If potential effects are anticipated, mitigation measures will be identified and considered for their effectiveness.

The potential effects on the Culture VC from Project activities include:

- Availability of infrastructure;
- Population changes;
- Direct habitat alteration and loss; and
- Competition for resources.

The magnitude to which each of the above effects is expected is directly related to the area and intensity of disturbance or alteration required. Furthermore, additional new linear disturbances (e.g., roads and transmission lines) will be reduced through the use of pre-existing developments and clearings, where possible.

7.16.4.4.1 Plant Species of Cultural Significance

Key effects on plant species of cultural significance were assessed relative to the Surface Footprint and are further described in Chapter 7.7 (Vegetation) and Chapters 11, 12, 13, 14, and 15. As most ecosystem units mapped in the Surface Footprint have the potential to support traditionally used plant species, the effect to plant species of cultural significance is closely related to the loss and/or alteration of ecosystems.

Direct habitat alteration or loss to plant species of cultural significance will be primarily through clearing activities related to the Transmission Line construction activities. With the exception of access roads associated with the Transmission Line, clearing of ecological communities that have the potential for traditional plant species along the Transmission Line will result in the removal of taller tree and shrub species but will not include soil stripping or the removal of lower shrubs or herbaceous species. Therefore, the total amount of traditional use species that will be lost along the Transmission Line cannot be quantified. No mature birch retention areas for First Nations are present in the Surface Footprint (FLNRORD, 2021d)

Alteration of plant species of cultural significance may occur due to edge effects related to previously cleared areas, clearing along the Transmission Line and through dust deposition from use of gravel-surfaced roads.

Improved access roads for the construction of the Transmission Line may increase competition for harvesting and accessing plant species of cultural significance and may also increase indirect loss from the transportation of invasive species.

Effects on Vegetation have a direct effect on traditional land use. Lhtako Dené Nation harvest areas have been documented throughout the TLUOS study area and described in engagement activities. Particular importance has been placed by Lhtako Dene Nation on berry harvesting sites located within the Project area, and specifically along 500 Nyland Lake Road (Transportation Route).

7.16.4.4.2 Traditional Foods

Key effects on traditional foods were assessed relative to the impacts on fish and wildlife that are traditionally consumed by Indigenous Groups.

Members of Lhtako Dené Nation typically consume several types of fish, including Char; Dolly Varden; Lingcod; Chum Salmon; Pink Salmon; Sockeye Salmon (Kokanee); Chinook Salmon (spring salmon); Sturgeon; Suckers; Trout; Rainbow Trout; and Whitefish. Furthermore, the group traditionally consumes wildlife, including deer, moose, beaver, and black bear. Important berry species include cranberries, huckleberries, Saskatoon berries, and soapberries.

Members of Williams Lake First Nation and Xatśūll First Nation typically consume several types of fish, including Burbot; Char; Sockeye Salmon (Kokanee); Lingcod; Chinook Salmon (spring salmon); Sturgeon; Suckers; and Rainbow Trout. Furthermore, the group traditionally consumes wildlife, including deer, moose, beaver, and caribou, and elk. The groups additionally value Huckleberries, Soopolallie, balsam bark, Devil's club, mountain potatoes, birch bark, roots, and Saskatoon berries.

It is anticipated that any impacts to traditional food sources will be mitigated.

7.16.4.4.3 Indigenous Language and Teaching

Key effects on Indigenous Language and Teaching were assessed relative to the statistics based on the spoken languages within the community.

English was spoken by all members and French was spoken by none. Forty of the 100 respondents spoke Indigenous languages with more females than males speaking Indigenous languages. Approximately 30% of individuals learned an Indigenous language as their first language and approximately 25% spoke an Indigenous language. More females than males speak Indigenous languages at home.

For this Project, there is no anticipated effect on Indigenous language and teaching as English is already spoken by all members of Lhtako Dené Nation.

English was spoken by all members, and French by none. Forty-five of the 190 respondents spoke indigenous languages with similar numbers of males and females speaking indigenous languages. Approximately 10% of individuals learned an Indigenous language as their first language and approximately 10% spoke an Indigenous language at home.

For this Project, there is no anticipated effect on Indigenous language and teaching as English is already spoken by all members of Williams Lake First Nation.

English was spoken by all members, and French by none. Forty-five of the 190 respondents spoke Indigenous languages with more males than females speaking indigenous languages. Approximately 30% of individuals learned an Indigenous language as their first language and approximately 10% spoke an Indigenous language at home with more females than males speaking at home.

For this Project, there is no anticipated effect on Indigenous language and teaching as English is already spoken by all members of Xatśūll First Nation.

Mitigation measures pertaining to the availability of infrastructure for cultural gatherings and events where teaching opportunities may occur could be impacted and are discussed in Section 7.16.5.

7.16.4.4.4 District of Wells Art Sector

Key effects on the district of Wells' Art sector were assessed relative to the availability of infrastructure and the perceived views of the community as they relate to the arts.

The availability of infrastructure was identified as a potential effect as during the interviews with the community; it was made clear that there was a growing lack of hotel and accommodation space for visitors, resulting in negative effects to the tourism industry. In part, this is due to ODV's purchase of hotel spaces in Town. These purchases stimulated the economy; critics note that it has contributed to the already existing pattern of Wells being viewed as a Town to pass through on the way to Barkerville. As the Wells' arts sector seeks to continue to grow and gain exposure, the lack of hotel space is anticipated to be a hinderance for visitors who are looking for to explore the arts sector in Wells.

During the interviews with the community, it was noted as well that Wells is not a unified community; instead, the population is comprised of separate groups. This project would likely disproportionally increase the mining population in the community, which may contribute further to the cohesion issue caused by already existing groups. For merchants, there are no anticipated negative effects; however, for artists, there could be a fear of cultural displacement that could take place.

The Project is expected to bring a significant amount of jobs to the community. ODV has already stated that they're interested in employing local people and providing training for positions where people may have a similar experience. This type of investment in the local population and skilled workers can attract more to move to the community, resulting in positive impacts to the community and greater resources for the school. This economic benefit could benefit those in the arts community who have skills suited for ODV.

7.16.4.5 Summary of Effects

The potential effects identified through their interaction with the Culture VC Subcomponents include Availability of infrastructure; Population changes; Direct habitat alteration and loss; and Competition for resources.

An increase in the population within the District of Wells may impact the availability of infrastructure needed for social gathering, education, events and community functions. Locations such as community halls and open spaces may experience increased competition for use by a wider array of interest groups. If so, there is potential for the decreased availability for such locations to have a negative effect on the opportunities for Indigenous events where language and teaching may be shared, and also for District of Wells arts events that would showcase local talent and opportunity for involvement. Mitigation measures will help to minimize negative effects related to the availability of infrastructure.

Changes to population demographics were assessed relative to their potential to negatively effect opportunities for use of Indigenous language. It was determined that there is to be no anticipated effect on Indigenous language and teaching as English is already spoken by all members of the participating Indigenous nations and would not negate the opportunity to practice Indigenous language skills in the community.

Ground disturbance and clearing related to the transmission line has the potential to impose direct habitat alteration and loss, leading to a negative effect on the growth and gathering of plant species of cultural significance. Habitat alteration and loss may also impose negative effects on the availability of traditional foods used by Indigenous nations. Mitigation measures are required to manage potential effects from direct habitat alteration or loss.

An increase in population may lead to increased competition for resources between interest groups (hunters, recreationists, Indigenous Nations), including traditional foods and plant species of cultural significance. Mitigation measures are required to manage potential effects from increased competition for resources.

7.16.5 Effects Management

This section describes the mitigation approach, the effectiveness and uncertainty of the mitigation approach, the mitigation summary and enhancement measures related to the Culture VC.

7.16.5.1 Mitigation Approach

Mitigation measures that are expected to reduce or eliminate an adverse effect, or enhance a positive effect, are described below and summarized in Table 7.16-16. Mitigation measures include mitigation integrated into Project design and specific mitigation identified for cultural interests.

The selection of mitigation measures for the Culture VC was informed by:

- A review of mitigation measures recommended or implemented for linked VCs AND Indigenous Interests;
- Regulator input, policies, and guidelines; and
- Internal evaluation of technical and economic feasibility.

Details on project-specific mitigation measures are provided in Chapter 7.0 and summarized in Appendix 20.1. Mitigation measures for the Project are based on the review and consideration of pre-existing best management practices (BMPs), regulatory and guidance documents, and mitigation measures successfully employed for similar projects. The selection of mitigation options appropriate to the Project was assisted through consideration of the "Procedures for Mitigating Impacts on Environmental Values (Environmental Mitigation Procedures)" (ENV, 2014a).

In addition, Project-specific management and monitoring plans that may relate to the identified potential effects will be developed (Table 7.16-15).

Table 7.16-15 Project-specific Management and Monitoring Plans Relevant to Culture

Management Plans	Monitoring Plans
• Environmental Management System (EMS) • Archaeological and Cultural Heritage Resources Management Plan, including a Chance Find Management Plan • Chemicals and Materials Storage, Transfer and Handling Plan • Construction Environmental Management Plan • Fuel Management and Spill Contingency Plan • Invasive Plant Management Plan • Mine Emergency Response Plan • Occupational Health and Safety Plan • Soil Management Plan • Surface Erosion Prevention and Sediment Control Plan • Traffic Control Plan • Vegetation Management Plan • Waste (Refuse and Emissions) Management Plan [a project-specific Fugitive Dust Control Plan, Air Quality Monitoring Plan, and Energy and Greenhouse Gas Management Plan will be incorporated] • Wildlife Management Plan, including a Caribou Mitigation and Management Plan	• Aquatic Effects Monitoring Program • Environmental Monitoring Plan • Noise Management and Monitoring Plan • Socio-Economic Monitoring Plan

In addition to the abovementioned plans, ODV will commit to the development of an Indigenous Partnership Plan. This plan will outline procedures to be implemented for maximizing Project opportunities for participating Indigenous nations. The plan will be developed in collaboration with participating Indigenous nations. The document will also outline a plan for participating Indigenous nations concerns and issues monitoring.

7.16.5.2 Effectiveness and Uncertainty of Mitigation

The anticipated effectiveness of mitigation measures to minimize the potential for effects to the Culture VC has been evaluated and classified according to the methods described in Chapter 6.

The key measures proposed for mitigating potential effects on the Culture VC from increased population and demand for services and infrastructure as well as habitat loss or alteration and competition for resources, along with mitigation effectiveness and uncertainty are outlined in the Mitigation Summary (Section 7.16.6.3) and Table 7.16-16. This table also identifies the residual effects that will be carried forward for residual effects characterization and significance determination.

In general, mitigation measures have moderate (i.e., the effect is moderately changed) or high (i.e., the effect is practically eliminated) effectiveness ratings. The timing for most mitigation measures to become effective is immediate as these measures are part of Project design, rely on avoidance or prevention of effect through BMPs or regulatory requirements, or will be implemented early in a Project phase.

The proposed mitigation measures include standard measures that are known to be effective (based on relevant/applicable experience with other mining and resource development projects), and therefore the uncertainty associated with their use is low. Any uncertainty associated with the effectiveness of the proposed mitigation measures will be addressed through Socio-economic Management Plan that will be developed and implemented prior to construction. If monitoring indicates that effectiveness of mitigation measures is lower than anticipated, additional mitigation may be required through adaptive management strategies.

7.16.5.3 Mitigation Summary

Table 7.16-16 below provides the proposed mitigation measures associated with potential effects to the Culture VC.

Table 7.16-16 Proposed Mitigation Measures and Their Effectiveness – Culture

Project Phase	Valued Component/Subcomponent	Project Effects	Mitigation	Effectiveness	Uncertainty	Potential Residual Effect
Construction/Operations	Plant Species of Cultural Significance	Direct habitat alteration and loss	• Vegetation clearing, soil stripping, grubbing, and grading for construction, temporary workspace, or storage areas, will occur only within the Certified Project Surface Footprint. • Existing infrastructure will be utilized (e.g., Mine Site haul roads, Transportation Routes, Transmission Line and associated access roads). • Develop an Indigenous Partnership Plan.	Moderate	Low	Yes
	Traditional Foods	Direct habitat alteration and loss	• Vegetation clearing, soil stripping, grubbing, and grading for construction, temporary workspace, or storage areas, will occur only within the Certified Project Surface Footprint. • Existing infrastructure will be utilized (e.g., Mine Site haul roads, Transportation Routes, Transmission Line and associated access roads). • Mitigation measures will be developed in consultation with regulators and participating Indigenous Nations when traditional foods are found. • Develop an Indigenous Partnership Plan.	Moderate	Low	No
		Competition for resources	• Existing infrastructure will be utilized (e.g., Mine Site haul roads, Transportation Routes, Transmission Line and associated access roads). • ODV, through its existing Community Relations Policy, is committed to encouraging employees and subcontractors to interact with Indigenous and local communities, organizations, groups and individuals with respect and integrity through raising awareness and acceptance of cultural differences and fostering diversity and inclusion. • Develop an Indigenous Partnership Plan.	Moderate	Low	No
	Indigenous Language and Teaching	Availability of infrastructure	• Develop and implement a Community Involvement Plan. • Coordinate with Indigenous nations to ensure scheduled availability of resources and facilities for culturally significant events and gatherings. • Provide participating Indigenous nations with a direct contact at ODV for any matters related to the Project.	High	Low	No
		Population Changes	• Inform Quesnel, Wells, CRD and participating Indigenous nations regarding anticipated timing of construction, number of workers and duration of construction so that they can plan and provide input to ODV regarding events, gatherings and culturally significant learning opportunities. If possible, ODV will work to accommodate scheduling conflicts as they arise. • ODV, through its existing Community Relations Policy, is committed to encouraging employees and subcontractors to interact with Indigenous and local communities, organizations, groups and individuals with respect and integrity through raising awareness and acceptance of cultural differences and fostering diversity and inclusion. ODV will review census information as it becomes available to proactively note any changes to Indigenous language and teachings. If a significant trend or change is identified. ODV will work with Indigenous groups to develop mitigation measures. • Provide participating Indigenous nations with a direct contact at ODV for any matters related to the Project.	High	Low	No

Project Phase	Valued Component/Subcomponent	Project Effects	Mitigation	Effectiveness	Uncertainty	Potential Residual Effect
Construction/Operations	District of Wells Art Sector	Availability of infrastructure	• Develop and implement a Community Involvement Plan. • Develop a strategy to mitigate pressures on recreation and tourism in the Project area due to increased population and visitors. • Contact industry leaders in the tourism industry at least semi-annually to better understand the impacts on the sector, if any, caused by ODV. • ODV to host community events to promote and encourage Arts and Culture within the District of Wells. • ODV will support the arts in the District of Wells by continuing to work closely with Wells' arts-related stakeholders and organizations to discuss benefits that can be provided by ODV to support the arts sector and arts infrastructure. • Develop a subpage on the ODV website for Wells residents to submit feedback directly to the Project Team. • Develop a strategy to mitigate pressures on recreation and tourism in the Project area due to increased population and visitors.	High	Low	No
		Population Changes	• Develop a subpage on the ODV website for Wells residents and stakeholders to submit feedback directly to the Project Team. • Develop and implement a Community Involvement Plan. • ODV is committed, through its existing Hiring Policy, to Implement a gender inclusive local hiring program and offer equal employment opportunities to all people regardless of their background and sexual orientation. • Contact key leaders of the arts sector at least semi-annually to better understand the impacts on the sector, if any, caused by ODV. • ODV will support local theatre events. • ODV will promote the arts sector to all workers. • ODV will support Island Mountain Arts to enhance youth programs and encourage participation.	High	Low	No
Closure	Plant Species of Cultural Significance	Direct habitat alteration and loss	• Revegetation activities will implement plant species of cultural significance, including species identified as traditional food.	Moderate	Low	Yes
	Traditional Foods	Direct habitat alteration and loss	• Revegetation activities will implement plant species of cultural significance, including species identified as traditional food. • Develop and implement an Indigenous Partnership Plan.	Moderate	Low	No
		Competition for resources	• ODV, through its existing Community Relations Policy, is committed to encouraging employees and subcontractors to interact with Indigenous and local communities, organizations, groups and individuals with respect and integrity through raising awareness and acceptance of cultural differences and fostering diversity and inclusion.. • Develop and implement Indigenous Partnership Plan.	Moderate	Low	No
	Indigenous Language and Teaching	Availability of infrastructure	• Develop and implement a Community Involvement Plan. • Coordinate with Indigenous communities to ensure scheduled availability of resources and facilities for culturally significant events and gatherings. • Provide Indigenous Groups with a direct contact at ODV for any matters related to the Project.	High	Low	No

Project Phase	Valued Component/Subcomponent	Project Effects	Mitigation	Effectiveness	Uncertainty	Potential Residual Effect
Closure	Indigenous Language and Teaching	Population Changes	• Inform Quesnel, Wells, CRD and Indigenous Groups regarding anticipated timing of construction, number of workers and duration of construction so that they can plan and provide input to ODV re events, gatherings and culturally significant learning opportunities. If possible, ODV will work to accommodate scheduling conflicts as they arise. • ODV, through its existing Community Relations Policy, is committed to encouraging employees and subcontractors to interact with Indigenous and local communities, organizations, groups and individuals with respect and integrity through raising awareness and acceptance of cultural differences and fostering diversity and inclusion. • ODV will review census information as it becomes available to proactively note any changes to Indigenous language and teachings. If a significant trend or change is identified. ODV will work with Indigenous groups to develop mitigation measures. • Provide Indigenous Groups with a direct contact at ODV for any matters related to the Project.	High	Low	No
	District of Wells Art Sector	Availability of infrastructure	• Develop and implement a Community Involvement Plan. • Develop a strategy to mitigate pressures on recreation and tourism in the Project area due to increased population and visitors. • Contact industry leaders in the tourism industry at least semi-annually to better understand the impacts on the sector, if any, caused by ODV. • Develop a subpage on the ODV website for Wells residents and stakeholders to submit feedback directly to the Project Team.	Moderate	Low	No
		Population Changes	• Develop and implement a Community Involvement Plan. • Contact key leaders of the arts sector at least semi-annually to better understand the impacts on the sector, if any, caused by ODV. • ODV will support local theatre events. • ODV will support Island Mountain Arts to enhance youth programs and encourage participation • Develop a subpage on the ODV website for Wells residents and stakeholders to submit feedback directly to the Project Team.	High	Low	No

7.16.6 Assessing Positive Effects

A number of effects on the Community of Wells will be largely positive. The potential economic development that this project can bring will be largely positive to the community. The increased population provides opportunity for increased viewership and attendance for cultural events, sale of (and potential contribution to) marketable art, and a wider population base for fundraising related to the Arts. The effect would be measured by changes in attendance numbers as cultural events, and sales volume for art products. For these effects, no effects management approached are necessary.

7.16.7 Assessing Negative Residual Effects

7.16.7.1 Summary of Residual Effects

The residual effects for Culture after application of mitigation measures are:

- Direct habitat alteration and loss of plant species of cultural significance.

As the primary element of Traditional Foods that will experience a negative residual effect pertains to the vegetation species, only the effects to the Plant Species of Cultural Significance subcomponent have been carried through the assessment.

7.16.7.2 Methods

The characterization of potential residual effects was based on several criteria including context, magnitude, extent, duration, reversibility, frequency, and risk and uncertainty (likelihood and consequence). These criteria are defined for Culture in Table 7.16-17.

Table 7.16-17 Residual Effects Criteria – Culture

Criteria	Residual Effect Characterization
Context	**Low**: the receiving environment or population has a low resilience to imposed stresses and will not easily adapt to the potential residual effect. **Neutral**: the receiving environment or population has a neutral resilience to imposed stresses and may be able to respond and adapt to the potential residual effect. **High**: the receiving environment or population has a high natural resilience to imposed stresses and can respond and adapt to the potential residual effect.
Magnitude	**Negligible**: no detectable change from existing conditions. **Low**: the potential residual effect will slightly alter or change cultural practices in the area without changing its role or function. **Medium**: the potential residual effect will alter or change the nature, role, or function of the cultural practices in the area but will not affect its integrity. **High**: the potential residual effect will substantially alter or change the nature, role, or function of the cultural practices in the area and may thus jeopardize the integrity of the cultural.
Extent	**Limited**: the potential residual effect is restricted to the Surface Footprint. **Local**: the potential residual effect will be within the LAA. **Regional**: the potential residual effect will be within the RAA. **Beyond Regional**: the potential residual effect will be beyond the RAA.
Duration	**Short term**: the anticipated potential residual effect will be felt temporarily during the Project's Construction or Closure Phases only. Also applies to any effect that will occur for less than two years in operations. **Medium-term**: the anticipated potential residual effect will be felt for a limited period of time greater than two years, generally corresponding to the Operations Phase and Closure Phase. **Long-term**: the anticipated potential residual effect will be felt beyond the Closure Phase.
Reversibility	**Fully reversible**: cultural practices may fully recover and return to its pre-Project state. **Partially reversible**: cultural practices may partially recover from the Project changes. **Irreversible**: cultural practices will not recover and return to its pre-Project state.
Frequency	**Once**: effect is confined to one discrete event (month). **Regular**: effect occurs at consistent intervals. **Irregular**: effect occurs at sporadic intervals. **Continuous**: effects occur constantly.

7.16.7.2.1 Analytical Assessment Techniques

7.16.7.2.1.1 Risk and Uncertainty

For the purposes of this assessment, the likelihood and consequences of a potential residual effect occurring are described as risk.

Likelihood is the probability of an event occurring and can be influenced by many factors. For the purposes of this assessment, likelihood is rated as low, moderate or high, using the rating definitions provided in Section 6.7.1.8.

Consequence can be assessed as minor, moderate, or major (Chapter 6.0, Table 6.7-1) based on the combination of magnitude and extent of the residual effect.

Based on the results of the likelihood and consequence ratings for each residual effect, as described above, risk can be determined. A matrix of risk ratings using likelihood and consequence for the Project has been provided in Chapter 6.0, Table 6.7-2.

Many types of uncertainty are relevant to assessing whether an effect will occur and the implications of the effect. Uncertainty in the assessment is to be expected, particularly when predicting outcomes in complex physical, biological, and human systems. The assessment includes a characterization of uncertainty and level of confidence in the potential residual effects. Confidence is a measure of how well potential residual effects are understood and the quality of the input data. It considers the level of uncertainty associated with the residual effects assessment.

The following are considered in the determination of confidence in the residual effects assessment for culture:

- Reliability of data inputs and analytical methods used to predict Project effects;
- Confidence regarding the effectiveness of mitigation measures;
- Certainty of the potential outcome; and
- Confidence ratings and definitions as described in Section 6.7.1.8.

7.16.7.2.1.2 Importance

Importance of a residual effect refers to whether the effect or underlying issue has been previously identified as an interest and/or priority of potentially affected participating Indigenous nations, the public, local governments, provincial or federal government agencies, or stakeholders. For the purposes of the EA, importance is defined as described in Section 6.7.2.

7.16.7.3 Potential Residual Effects

7.16.7.3.1 Direct Habitat Alteration and Loss of Plant Species of Cultural Significance

7.16.7.3.1.1 Residual Effect Analysis

Loss or alteration of known occurrences of plant species of cultural significance could occur as a result of Project activities.

Plant species of cultural significance or plant species of cultural significance are likely common in the Surface Footprint and LAA. While specific ecological communities may infer suitable habitat for plant species of cultural significance to be present (e.g., huckleberry, blueberry, or cranberry dominated ecosystems), population sizes of valued species within these communities may or may not be present with abundance to make them suitable for harvesting or other uses. Mitigation measures will be targeted to limit the amount of disturbance to natural plant communities that may result in the loss and alteration to plant species of cultural significance by limiting the extent of new vegetation clearing to the smallest extent possible, maintenance of hydrological connectivity, dust suppression and revegetation with a focus on re-establishing pre-disturbance ecological communities containing plant species of cultural significance.

Mitigation measures, including the implementation of a Vegetation Management Plan and Invasive Plant Management Plan will reduce the potential for the establishment and/or spread of invasive and/or non-native plant species in the Surface Footprint and LAA. Routine monitoring and adaptive management are expected to allow for control of invasive and non-native plant populations.

In addition to direct loss of plant species of cultural significance, the potential exists for indirect effects resulting in alteration of this sub-component through fugitive dust emissions, hydrological changes, and edge effects and fragmentation. Mitigation measures are anticipated to reduce these negative residual effects and reduce the alterations that may occur to this subcomponent.

7.16.7.3.1.2 Characterization of Residual Effect

The residual effect to Culture from Direct habitat alteration and loss of plant species of cultural significance is characterized in Table 7.16-18.

Table 7.16-18 Residual Effect Characterization for Plant Species of Cultural Significance

Criteria	Characterization	Rationale
Context	Neutral	Limited vegetation clearing will occur and will primarily occur along the Transmission Line. Invasive and non-native plants can be controlled with adaptive weed management practices. Plant species of cultural significance and forage species for wildlife are common in the Project region and reclamation and revegetation will be planned and implemented with a focus on re-establishing communities that support plant species of cultural significance.
Magnitude	Low	With the implementation of mitigation and the execution of reclamation, the residual effect is expected to slightly alter the ability of plant species of cultural significance to be re-established without changing their ability to persist in the reclaimed landscape.
Extent	Limited	The potential residual effect is anticipated to be restricted to the Surface Footprint. Impacts may occur beyond the area of direct disturbance but are not expected to occur beyond the 50 m buffer that has been applied around the area of direct disturbance.
Duration	Medium Term	Re-establishment of pre-disturbance plant communities within the Mine Site and QR Mill footprints will take decades beyond reclamation to reach a seral stage to support pre-disturbance micro-habitats for plant species of cultural significance. Invasive and non-native plant infestations are not expected to occur beyond pre-disturbance levels with mitigation.
Reversibility	Fully Reversible	Loss and alteration of plant species of cultural significance are expected to be reversed through mitigation and reclamation.
Frequency	Once	Loss of plant species of cultural significance is only expected to occur during vegetation clearing that will occur during construction. Alteration to plant species of cultural significance is expected to occur on an irregular basis due to potential edge effects and dust deposition.

7.16.7.3.1.3 Risk and Uncertainty

The assessment of the likelihood for the loss or alteration of plant species of cultural significance is presented in Table 7.16-19.

Table 7.16-19 Risk and Uncertainty Characterization for Plant Species of Cultural Significance

Criteria	Characterization	Rationale
Likelihood	High	Temporary loss of Plant Species of Interest will occur based on the understanding of Project activities (Chapter 1.0).
Consequence	Minor	As the magnitude and extent of loss or alteration to Plant Species of Interest has been assessed as low and limited, respectively, the consequence rating is classified as minor.
Risk	Low	As the likelihood and consequence of the residual effect is considered high and low, respectively, the risk rating is classified as low.
Confidence	High	The cause-effect relationships between the Project and Plant Species of Interest is well understood.

7.16.7.3.1.4 Importance

The loss of plant species of cultural significance is a high importance consideration due to participating Indigenous nations (traditional use plants) interests. The participating Indigenous nations have identified traditional harvesting sites as important with a desire to utilize existing traditional use resources that are unhindered and unaltered by development and/or contamination. In other words, confidence that plant species of cultural significance have not been negatively affected by the Project has been highlighted as important to local participating Indigenous nations. This understanding warrants a high importance rating related to the quality and health of plant species of cultural significance. In addition, BC and local municipalities have a vested interest in the protection of listed plant species and lichens, and the prevention, control and eradication of invasive and non-native species.

7.16.8 Characterization of Negative Residual Effects

Negative residual effects for Culture are summarized in Table 7.16-20.

Table 7.16-20 Summary of Residual Effects on Culture

Residual Effect	Context	Magnitude	Extent	Duration	Reversibility	Frequency	Affected Population	Risk	Confidence	Importance
Direct habitat alteration and loss of plant species of cultural significance	Neutral	Low	Limited	Medium Term	Fully Reversible	Once	Primarily Indigenous communities	Low	High	High

7.16.9 Cumulative Effects

7.16.9.1 Identified Residual Effects

The potential residual effects for Culture after application of mitigation measures are:

- Direct habitat alteration and loss of plant species of cultural significance.

7.16.9.2 Cumulative Effects Assessment Boundaries

The cumulative effects assessment boundaries are defined as the maximum spatial and temporal scales over which there is a potential for residual Project effects for Culture to interact with the potential residual effects of other past, present, and reasonably foreseeable future projects and activities.

7.16.9.2.1 Spatial Boundaries

The spatial boundary for the Culture VC cumulative effects assessment consists of the RAA defined for the Culture Project-specific effects assessment (Figure 7.16-1).

7.16.9.2.2 Temporal Boundaries

Temporal boundaries considered for the cumulative effects assessment of the Project include:

- Present and Ongoing: initiated prior to 2021 but anticipated to carry on beyond the construction start date of the Project; and
- Planned/Reasonably Foreseeable Future: planned to start during mine life (construction to post-closure). Generally, the proposed end date for inclusion in the effects assessment is 2046, which represents the end of the Post-closure (active care) Phase.

7.16.9.3 Interactions with Past, Present, or Reasonably Foreseeable Projects and Activities

Table 7.16-21 provides a list of Project activities within the Vegetation RAA, since the cultural effects relate specifically to vegetation species.

Additionally, natural disturbances, such as wildfire, pest infestations, and climate change have the potential to interact with the Project.

Table 7.16-21 List of Projects and Activities with potential to Interact within the Culture Residual Effects

Project / Activity	Temporal	Project Life	Location	Proponent
Bonanza Ledge Phase II Reclamation (outside Cariboo Gold Footprint)	Reasonably Foreseeable Future	Proposed	Within the Vegetation RAA	Osisko Development Corp.
Mosquito Creek Reclamation	Reasonably Foreseeable Future	Proposed	Within the Vegetation RAA	Osisko Development Corp.
Telecommunications Facility in Wells	Reasonably Foreseeable Future	Proposed	Within the Vegetation RAA	Telus
Recreation Use	Present (certain)	Ongoing	Within the Vegetation RAA	Various
Fishing	Present (certain)	Ongoing	Within the Vegetation RAA	Various
Forestry	Present (certain)	Ongoing	Within the Vegetation RAA	Various
Hunting	Present (certain)	Ongoing	Within the Vegetation RAA	Various
Mineral Exploration	Present	Ongoing	Within the Vegetation RAA	Various
Placer Mining	Present (certain)	Ongoing	Within the Vegetation RAA	Various
Transportation	Present	Ongoing	Within the Vegetation RAA	Various
Trapping	Present (certain)	Ongoing	Within the Vegetation RAA	Various

7.16.9.4 Existing Conditions

As the Cumulative Effect Assessment Area is identical to the Culture VC RAA, there are no differences for existing conditions for cumulative effects compared to Section 7.16.3 (Existing Conditions).

7.16.9.5 Potential Cumulative Effects

The anticipated cumulative effects associated with the Culture VC include:

- Additive loss or alteration of plant species of cultural significance resulting from the incremental loss and alteration of plant species of cultural significance resulting from Project activities and from the combination of other past, present and reasonably foreseeable future activities.
- Synergistic effects resulting from clearing (i.e., edge effects), hydrological changes dust deposition, and projected climate change.

As this cumulative effect is directly related to Plant Species of Cultural Significance and is identical to the cumulative effects discussed for the Vegetation VC (i.e., Plant Species of Interest, specifically traditional use plants), further discussion on the Potential Cumulative Effects, Mitigation Measures, and Adverse Cumulative Effects Characterization can be found in Section 7.7.8.8. A summary of the cumulative effects assessment specific to the Plant Species of Cultural Significance is provided below in Section 7.16.9.8.

Table 7.16-22 Interactions with Effects of Past, Present, and Reasonably Foreseeable Future Projects and Activities for Culture Residual Effects

Potential Residual Effect	Bonanza Ledge Phase II Reclamation	Mosquito Creek Reclamation	Tele-communications Facility in Wells	Recreation Use	Fishing	Forestry	Hunting	Mineral Exploration	Placer Mining	Transportation	Trapping
Loss or alteration of plant species of cultural significance	N	N	N	N	N	Y	N	Y	Y	Y	N

Notes: Y = Yes, interaction exists between the residual effect of the Project and the other past, current, or future project/activity.

N = No, interaction does not exist between the residual effect of the Project and the other past, current, or future project/activity.

Table 7.16-23 Summary of Adverse Cumulative Effects on Culture

Adverse Cumulative Effect	Context	Magnitude	Extent	Duration	Reversibility	Frequency	Affected Population	Risk	Confidence	Importance
Loss or alteration to Plant Species of Cultural Significance	Neutral	Low	Regional	Long term	Partially Reversible	Irregular	Primarily Indigenous communities	Moderate	Moderate	High

7.16.10 Follow-up Strategy

A follow-up program will be implemented to evaluate the effectiveness of mitigation measures on the Culture VC subcomponents to verify the accuracy of the predictions made in this Chapter. Targeted pre-construction field surveys and engagement with communities will be conducted prior to Construction to further characterize conditions related to the Culture VC subcomponents related to the Project. This information will be used to identify, evaluate, and track Project-related changes to the Culture VC over time.

Mitigation and monitoring strategies for the Culture VC will be updated within the management plans proposed for the Project (Section 7.16.5.1) to maintain consistency with BMPs, improved scientific methods, and regulatory changes that may become available during the life of the Project. Key stakeholders, participating Indigenous nations, and government agencies will be involved in developing follow-up strategies and additional mitigation plans as required.

As part of ongoing consultation and engagement with interested parties (including community representatives, participating Indigenous nations, and local government representatives), ODV will confirm interest in receiving regular updates on monitoring results and preferred mechanisms for sharing data and information. These groups will also be engaged on strategies to be employed if potential effects and mitigation effectiveness are not as expected.