

Alaska Highway West Local Area Plan

DRAFT Background Report

Prepared for: Yukon Government and Champagne and Aishihik First Nations
Prepared by: Stantec

Date: January 12, 2024

Alaska Highway West

This document was prepared by Stantec Architecture Ltd. for the Yukon Government Land Planning Branch and the Champagne and Aishihik First Nations. We acknowledge that this project is taking place within the traditional territory of the Champagne and Aishihik First Nations.



Table of Contents

1	INTRODUCTION	4
1.1	The Planning Area	4
1.2	What is a Local Area Plan?	5
1.3	How this Background Report was Developed	5
2	HISTORY	6
2.1	Ancient Times	6
2.2	Rapid Change of the 1900s	7
2.3	Modern Treaties	9
2.4	Archaeology and Heritage Sites	9
3	ENVIRONMENT	11
3.1	Landscape and Ecosystem	11
3.2	Wildlife and Habitat	13
3.3	Geohazards	16
4	LAND TENURE	18
4.1	Overview of Land Ownership	18
4.2	Yukon Government Land Use	18
4.3	CAFN Lands	19
4.4	Private Lands	19
4.5	Protected Areas	20
5	PEOPLE AND COMMUNITY	21
5.1	Residents	21
5.2	CAFN Communities	22
5.3	Community Buildings and Facilities	24
5.4	Trails and Recreation	24
5.5	Businesses and Commercial Operations	25
6	INFRASTRUCTURE AND PUBLIC SAFETY	27
6.1	Water and Sewer	27
6.2	Solid Waste	27
6.3	Energy	27
6.4	Telecommunications	28
6.5	Transportation and Access	28
6.6	Foothills Pipeline Easement	29
6.7	First Responders	29
7	OTHER LAND USES AND ACTIVITIES	30
7.1	Agriculture	30
7.2	Hunting and Trapping	30
7.3	Forestry	31
7.4	Gravel Resources	32
7.5	Mining and Mineral Potential	33
7.6	Contaminated Sites	33
8	PLANS AND LEGISLATION	34
9	FUTURE DEVELOPMENT AND GROWTH	35



Alaska Highway West

9.1	Population Projections.....	35
9.2	Land Suitability Map	35
10	PUBLIC INPUT	36
11	PLANNING CONSIDERATIONS	36
12	REFERENCES	37
APPENDIX A – PROJECT MAPS		1

LIST OF TABLES

Table 3.1	Climate Normals at Otter Falls (Environment and Climate Change Canada, 2023)	12
Table 3.2	Recent Forest fires in Planning Area	16
Table 4.1	Land Tenure.....	18
Table 4.2	Summary of The Government of Yukon Land Dispositions.....	18
Table 5.1	Residential Areas.....	21
Table 7.1	Gravel Resources	32
Table 8.1	Relevant Plans and Legislation.....	34

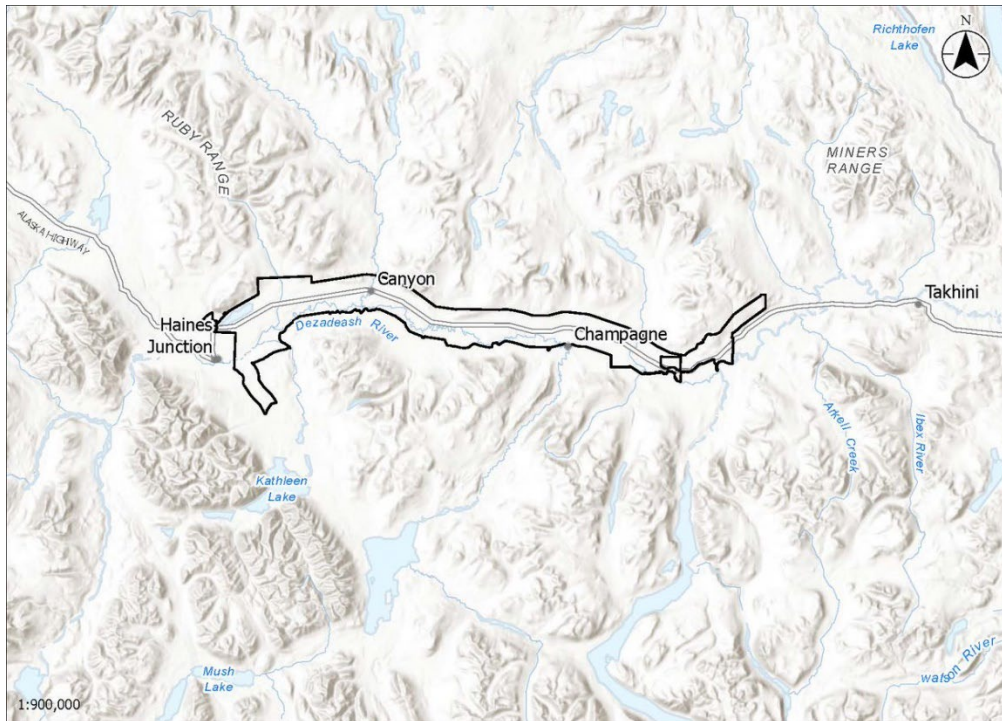


1 Introduction

1.1 The Planning Area

The Champagne and Aishihik First Nations (CAFN) and the Government of Yukon are working together to develop a Local Area Plan for the Alaska Highway West corridor. The purpose of the Local Area Plan is to coordinate land use and prevent future conflicts. This Background Report is the first step in the Local Area Planning process and brings together all the relevant information needed to make good land use decisions as planning moves forward.

The Planning Area is approximately 512 square (sq) kilometres (km) and extends along the Alaska Highway corridor from east of Haines Junction to just west of Takhini Subdivision. The Planning Area is roughly 5 km wide, extending 2.5 km north and south of the Alaska Highway. The Planning Area is within the Traditional Territory of the CAFN. Additionally, the CAFN share the traditional territory within the easternmost portion of the Planning Area with the Kwanlin Dün First Nation. The Planning Area is shown on the inset below and in more detail on *Map 1 – Planning Area and Land Use*. All maps are included in **Appendix A**.



Planning Area Location Map

The Planning Area includes Canyon, an important residential area for the CAFN and the residential subdivisions at Pine Lake and Marshall Creek Closer, east of Haines Junction. The Planning Area does not include the community of Haines Junction, Mendenhall Subdivision or the community of Champagne.

The predominate land use in the Planning Area is rural residential, with residents mainly choosing to live on larger properties in rural settings. The Planning Area includes several farms, timber harvest areas, businesses, and recreational opportunities. The Planning Area is also a key habitat for elk, bison, and other wildlife.

The Alaska Highway runs through the centre of the Planning Area, providing access to Haines Junction and the Yukon's northwesterly communities (Silver City, Destruction Bay, Burwash Landing and Beaver Creek). This area is unique as it is the key highway junction for those travelling on into Alaska. Approaching Haines Junction and Kluane National Park, majestic views of the mountains add to the draw of this area for residents and visitors.

1.2 What is a Local Area Plan?

Local Area planning is a form of collaborative land use planning as identified in Section 26.1 of the CAFN Self-Government Agreement. These plans are intended to guide development in an orderly fashion, minimizing land use conflicts, promoting sustainable development, and providing the residents of the area with some certainty about how land will be used in the future.

For Local Area planning to be successful, information, knowledge, and technical expertise of both the Government of Yukon and CAFN must be understood and considered together. The Plan should recognize and promote the history, heritage, and culture of the Yukon First Nation people within the Planning Area. CAFN citizens and other Yukon residents should have the opportunity to share information about the current and past use of the area, and their interests for the future.

1.3 How this Background Report was Developed

The CAFN and the Government of Yukon are together overseeing the development of this Background Report. To begin, information was gathered from both governments and brought together to create a draft report. A public engagement process was carried out in June 2023, to introduce the project and gather information about the Planning Area and understand what is important to residents and CAFN citizens. This information was used to develop a final Background Report.

2 History

2.1 Ancient Times

The Planning Area has been home to the Southern Tutchone people since time immemorial. The traditional name for the Haines Junction area is Dakwākāda, meaning "high cache". Raised log caches were used in the region by local First Nations people to store dried meat and furs year-round while they hunted and fished nearby.

For many thousands of years, seasonal hunting and fishing camps were used, with locations moving to reflect the ever-changing landscape. The area's broad valleys make for good travel routes and a well used coastal Tlingit trading route headed south, through the Chilkat Pass, to Haines Alaska.

Dakwākāda, with its intersecting trails, has been a good place for camping, harvesting gophers, and a staging place for hunting in the valley and nearby mountains.



CAFN's Heritage, Lands and Resources Staff Hunt for Gophers Near Annie Lake Creek (Source: CAFN)

2.2 Rapid Change of the 1900s

Non-First Nations people did not enter this area until the 1890s, when Jack Dalton and others began using the coastal Tlingit trading route to Haines Alaska for commercial purposes. In the early 1900s surveyors began using the area's trails to explore, mainly beginning in Haines and heading north through the Chilkat Pass. A few years later, the coastal trading route to Haines was used for commerce and trade and became known as the Dalton Trail.

The area began to change even more rapidly when gold was discovered by Dawson Charlie and Skookum Jim at Kloo Lake to the west of Haines Junction in 1903. This led to an influx of gold miners heading from Whitehorse following ancient foot paths. The arrival of non-Indigenous people in the area brought not only new goods such as metal traps, dishes, rice and tea, but also social change. Previously, the lives of the Southern Tutchone people were focused on the land, continuing the hunting, fishing and trapping ways of their ancestors. The way of life changed, as people began to make money from trapping, guiding big game hunters and jobs in mining.

In 1904, the Klwane Wagon Road was built from the Whitehorse-Dawson Overland Trail all the way to Silver City. It was based on a traditional trail but deviated in some sections to allow for horses pulling wagons. This route passed through the current location of Haines Junction and was used until the 1940s.



Canyon Creek Bridge Early 1900's (Photo Credit: Yukon Archives, E.J. Hamacher fonds - Margaret and Rolf Hougen collection, #837)

Alaska Highway West Local Area Plan – DRAFT Background Report

Although mining slowed, the routes was still used for commercial and government business. Several roadhouses grew up along the Kluane Wagon Road to serve the travel public. The Stony Creek, Mendenhall Landing, Jo-Jo, Champagne, Big Bend, Canyon Creek, and Marshall Creek roadhouses operated through the early 1900s, some for only a few years and some for longer. Settlements grew up gradually around Champagne and Canyon Creek.

The next big change for this area came in the mid-1940s when the Alaska Highway, connecting Dawson Creek British Columbia with Big Delta Alaska, and the Haines Road, going south over the Chilkat Pass to Haines Alaska, were completed. Haines Junction was a construction camp and an important supply and service centre for the U.S. Army Corps of Engineers who were building the Highway. Both the Alaska Highway and the Haines Road were open to non-military through traffic in 1948.



Cabin in Canyon Creek in 1942 Demolished When Alaska Highway Was Built (Source: CAFN Archive)

The Alaska Highway Maintenance Camp at Milepost 1016 at the junction of these two roads, grew gradually and by the early 1950s, the Haines Junction Townsite had been subdivided and both a school and Royal Canadian Mounted Police (RCMP) station were opened.

This was a period of rapid and profound change for the local Southern Tutchone people. Traditional camps and seasonal settlements, like in Canyon Creek, were demolished during Highway construction. The influx of population from the building of the Highway affected the wildlife population, which led to the implementation of the Kluane Game Sanctuary west of the Highway. Families were suddenly banned

from harvesting in a large portion of the Traditional Territory. Individuals were then enrolled into the Champagne and Aishihik Indian Bands. Government control through the Indian Act and the Indian Agent now began to play a major role, determining where people could live and what they could do. Not allowed to vote, own property or a business, Champagne and Aishihik people were second-class citizens in their own homeland and were forced to assimilate.

Many children were sent to residential schools. The Government also confiscated children and adopted them out to non-Indigenous people. Living in Department of Indian Affairs houses in larger multi-cultural communities was something new. Racism was commonly experienced and diseases such as tuberculosis and measles took their toll. The new economy, language, religion, educational system and legal system contributed to a sense of confusion and loss of identity. A disproportionate number of Indigenous children were forced into care and fostered or adopted by non-Indigenous families. Devastating experiences were common for those who survived residential school or the experience of being raised in a different culture. The traumatic experiences of the 20th century have affected multiple generations and continue into the present.

2.3 Modern Treaties

In 1973, Yukon First Nation leaders presented the document *Together Today for Our Children Tomorrow* to Canada's Parliament in Ottawa. Champagne and Aishihik's Elijah Smith, Harry Allen and Dave Joe were leaders in the Yukon-wide land claims negotiation process and instrumental in crafting the *Umbrella Final Agreement* for all Yukoners. This document established the overall framework for a new relationship between Yukon's Indigenous people and the governments of Canada and the Yukon.

The Champagne and Aishihik First Nations was one of the first four Yukon First Nations to negotiate its own final land claims agreement. The process was long and complex. The *Final Agreement* was signed in 1993. The modern-day treaty and self-government agreement gives ownership and legislative authority over lands in their traditional territory settlements lands and gives the powers as a self-governing First Nation, with authority to manage a range of matters including the economy, wildlife, heritage, education, lands, and resource management. These agreements also set out a framework for CAFN's participation in cooperative planning for all lands and resources within their Traditional Territory.

Surveyed CAFN lands fall into three categories; Category A lands over which the First Nation has complete ownership of surface and subsurface; Category B lands, where the First Nation owns the surface rights only; and fee simple lands. More information about these lands can be found in Section 4.3.

2.4 Archaeology and Heritage Sites

The Planning Area has a long and rich history, both before and after the arrival of Europeans. This history is still evident through the large number of heritage sites. The CAFN and the Government of Yukon maintain records that include information about heritage sites; two of these datasets are the Yukon Archaeological Sites Inventory (YASI), and Yukon Historic Sites Inventory (YHSI). These are both restricted datasets and the locations of sites cannot be shown publicly.

Alaska Highway West Local Area Plan – DRAFT Background Report

The YASI includes records for archaeological sites (i.e. sites that pre-date the arrival of Europeans in the territory) like villages, or ancient camps and hunting or fishing sites. The physical evidence left behind at archaeology sites are mostly stone tools or fragments from making stone tools, as well as animal bones and charcoal from ancient campfires, since these are what preserve in the forest soils. Sites in the YASI are protected from disturbances by legislation. The YHSI is a record of the Yukon's historical places, like old roadhouses, graves, cabins or infrastructure. YHSI sites area also protected by legislation, with exceptions for things like privately owned historical buildings or infrastructure. The YASI and YHSI are both maintained by the Government of Yukon and are updated as heritage sites. Sites are recorded either by members of the public, researchers, or during heritage assessments that are carried out for developments.

There are close to 200 recorded heritage sites in the Planning Area (~140 archaeological sites, ~40 historical sites). Many of the recorded sites are located along the Alaska Highway, or by Champagne (Shadhäla), Canyon (the Yänlin) and near the Mendenhall River (Dú Chù). The oldest archaeological site in the Planning Area dates to around 7,000 years ago and is located near Canyon. Stone tools, including spear points and microblades as well as bison bones were found at the site. This site, along with a site near Pine Lake, where specimens of ancient horse and elk were found, are both registered palaeontological site.

Archaeological excavations at sites along the Alaska Highway near Champagne and the Mendenhall River also recovered microblades, scrapers and projectile points. Some artifacts were made of obsidian (volcanic glass) that would have likely been obtained through trade with people living near volcanic sources either in northern BC or southwest Yukon. One copper artifact was also found during these excavations, and likely dates to more recent times (past 1000 years).

Though few archaeological sites have been studied in detail, they indicate consistent occupation of the area over the millennia. It is very likely that many more sites will be identified through future research and heritage assessments in the area.

There are two heritage reserves in the Planning Area (115A14-002 and 2018-1840) and both are near Canyon. Heritage reserve 115A14-002 is related to the Canyon Creek bridge, which is a significant historical structure that was originally built in the early 1900s as part of the Kluane Wagon Road. Heritage reserve 2018-1840 is related to elevated heritage potential along the high bluffs that overlook the Dezadeash and Aishihik Rivers. There is also an Administrative Hold near Canyon related to heritage sites in the area.



3 Environment

3.1 Landscape and Ecosystem

The Planning Area is located within the Southern Lakes Ecoregion of the Boreal Cordillera Ecozone. The elevation of the Dezadeash River valley is about 585-700 metres above sea level, while the highest elevation is 1239m (Yukon Ecoregions Working Group, 2004). This region is characterized by broad valleys with numerous lakes, streams, and wetlands (Yukon Ecoregions Working Group, 2004).

GEOLOGY

The Planning Area's mountains and valleys are generally a result of underlying bedrock geology and the work of glaciers over the past 30,000 years. The Yukon Geological Survey has mapped six distinct groups of bedrock geology, which are shown on *Map 2 - Surficial Geology*. Three of these groups (Paint Mountain pluton, Pyroxenite Creek, Annie-Ned Batholith) are plutonic, igneous rock that formed between the Cretaceous and Eocene eras deep underground and then gradually rose to the surface and formed. The remaining three (Bear Creek, Kluane Schist and Snow Cap) are all groups of metamorphic rock (Yukon Geological Survey, 2022). There are also few places in the area where the bedrock outcrops occur and instead, sedimentary materials deposited since the last glaciation dominate (Yukon Geological Society, 2021).

North of the Dezadeash River, between Pine Lake and the Aishihik River, undifferentiated tills were deposited during the recurring periods of glaciation. Till deposits are also common east of Pond Creek and north of the Takhini River. Smaller deposits can also be found among the hills north of the Dezadeash River, and east of the Aishihik River (Yukon Geological Society, 2021).

Extensive throughout the terraces of the region are deposits of glacio-lacustrine origin. These sediments are tied to two glacial lakes in the region, Glacial Lake Champagne and Neoglacial Lake Alsek (both outside the Planning Area). Glacial Lake Champagne formed at the end of the last glaciation when Dezadeash River was cut off by the retreating glacier. Neoglacial Lake Alsek formed and drained when the Lowell Glacier blocked the Alsek River to the west on six occasions in the last three thousand years, with the most recent event in the 1800s (Clague & Rampton, 1982). These deposits are mostly fine silts and clays, with sands and fine gravels occasionally found along ancient nearshore and beach environments.

Also found in the midlands above the Aishihik River and between Moose Creek and Champagne are eolian sand dunes and deposits that formed in the recession of the glaciers and glacial lakes; areas now covered with vegetation. Around the wetlands and meltwater ponds, organic material, such as peat, dominate.

Within the Planning Area, active and ancient fluvial (riverine) processes have left an undeniable imprint on the landscape. The Aishihik, Dezadeash, Mendenhall, Kathleen and Takhini Rivers, along with the numerous creeks continue to actively erode and deposit sediments in the channels and flood plains of the



valley bottoms. Within the active floodplains, which was discerned from mapping breaks in topography and forest disturbances along the banks of the rivers, well sorted layers of sands, and gravels can be found, including the occasional silt oxbows and side channels.

At the outlet of Pine Lake, along the Kathleen River and immediately north of Stony Creek camp, there are numerous and ancient channels that formed from the meltwaters of the receding glaciers. The surficial geology of these areas can be distinguished from regular riverine processes, in that the meltwater pulses created broads and braided channels on the landscape, often perched well above modern day rivers, and dominated by large deposits of poorly sorted sands, gravels and cobble. These ancient channels are valuable in that they often have potential as easily accessible, large and reliable sources of material for aggregate required for construction.

With the Planning Area, eight minor faults and one major fault are currently mapped (Yukon Geological Survey, 2022). The major fault is the Kluhini River thrust fault, that bisects the Planning Area between Moose and Dune Creeks.

CLIMATE

The Planning Area is characterized as being quite arid due to the rain shadow effect off the St. Elias-Coast Mountains to the west; summarized in *Table 3.1*. Annual precipitation in the area is less than 300 mm, and about a third of this comes as snowfall between October and April. Temperatures in the region are cold overall but highly variable, with an annual average temperature below freezing (-1.4°C), but extremes between -46°C to 31°C recorded between 1970 and 2010 (Environment and Climate Change Canada, 2023). The growing season is short with only four months, June to September, when the daily minimums stay above freezing.

Table 3.1 Climate Normals at Otter Falls (Environment and Climate Change Canada, 2023)

	Jan.	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Year
Daily Mean Temperature (°)	-16.1	-12.2	-7.7	-0.7	5.9	10.9	13.0	10.8	5.8	-1.5	-11.7	-13.7	-1.4
Daily Maximum Temperature (°)	-11.2	-6.3	-1.1	5.5	12.3	17.4	19.1	16.8	11.4	3.1	-7.2	-9.1	4.2
Daily Minimum Temperature (°)	-21.0	-18.0	-14.3	-6.9	-0.5	4.4	6.8	4.8	0.0	-5.9	-16.2	-18.3	-7.1
Precipitation (mm)	16.2	13.2	12.2	8.5	21.0	43.7	54.5	43.1	31.0	23.5	17.0	14.7	298.6
Rainfall (mm)	0.0	0.1	0.0	0.6	17.7	43.5	54.5	43.1	27.5	7.9	0.0	0.4	195.3
Snowfall (cm)	16.2	13.1	12.2	7.9	3.2	0.2	0.0	0.0	3.6	15.6	17.0	14.3	103.2

WATER AND HYDROLOGY

Situated in the Interior Hydrologic Region (Yukon Ecoregions Working Group , 2004), the largest river in the area is the Takhini River, followed by the Dezadeash, Aishihik, and Mendenhall Rivers, in decreasing order of size. These rivers are fed by the area’s numerous creeks. Meltwater ponds and wetlands (mostly

fens) are common throughout the area, especially on the floodplains and glacio-lacustrine terraces. There are numerous small lakes in the region. The only large body of standing water within the Planning Area is Pine Lake, located in the northwest. Annually streamflow patterns on the larger rivers are characterized by large flows in the spring, peaking in June as result of snow melt. For smaller streams, it is estimated that 40% percent of the annual flows originate from intense but short-lived summer thunderstorms (Yukon Ecoregions Working Group , 2004).

SOILS

Due to the relatively recent recession of the glaciers and the aridity of the climate in the area, mineral soils and peat accumulations in the region are typically weakly weathered and less than one metre in thickness (Yukon Ecoregions Working Group , 2004). These shallow soils are also typically alkaline in the main valleys due to the glacio-lacustrine deposits of calcareous silts and clays deposited here. Relatively thicker organic layers are to be expected in the grasslands, especially on a south facing slope. In areas where the soils are well drained, permafrost is typically discontinuous and has low ice content, but in poorly drained sites the permafrost becomes more continuous and the ice content is high, with active frost churning to be expected.

VEGETATION

Vegetation cover varies widely within the Planning Area. At lower elevations, vegetation is open and closed canopy boreal forests of predominantly white spruce, trembling aspen, balsam poplar, and paper birch. Drier sites include stands of lodgepole pine, with subalpine fir occurring at higher elevations. Alpine tundra with sedge-dominated meadows occurs at the higher elevations, along with rock fields colonized by lichen (Yukon Ecoregions Working Group 2004).

Where active floodplains or mature stands have not been impacted by wildfire in the last hundred years, white-spruce feather moss forests are common. Similarly, the terraces of the Dezadeash valley are characterized by mixed forests of lodgepole pine and white spruce, with pine being dominate in areas disturbed by fires in the last hundred years. In areas that are north of the Alaska Highway, along Marshall Creek, and east of Mendenhall Landing, there are large open areas of grasslands and alkaline lacustrine depressions, commonly occupied by shrub birch.

Balsam poplar is commonly found in disturbed (e.g., recent wildfire) and riparian areas along streams, but is often replaced by white spruce as the forests recover and successional matures. Paper birch on the other hand, doesn't form any stands of its own, but can be found throughout the Planning Area in stands of mixed tree species. *Map 3 – Vegetation Cover*, shows the current land cover in the Planning Area.

3.2 Wildlife and Habitat

The sections below discuss the wildlife and habitat in the Planning Area and can be seen on *Map 4 – Key Wildlife Habitat*.

MAMMALS

The Planning Area has a varied landscape with different habitats, and thus is home to a wide variety of species of mammals, shown on *Map 4*. Moose habitat is mapped throughout the valley bottoms of the Aishihik, Dezadeash, Kathleen and Mendenhall Rivers. Except for the Aishihik River valley and Northeast of Pine Lake, most of the moose habitat lies south of the Alaska Highway. Elk habitat is mapped throughout the lowlands and midlands of the Planning Area, to the east of Pond Creek, mostly in the Takhini and Ibx River valleys. While common in the region, the key habitat areas for mule deer are around more open forests at Canyon and the open areas in the Takhini River valley.



Elk along the Alaska Highway (Photo Credit: Yukon News)

Dall sheep (thinhorn) habitat has been mapped throughout the Planning Area, in highlands to the east of Marshall Creek and west of the Mendenhall River. Conversely, mountain goat habitat can be only found in the highlands between the Aishihik River and Moraine Lake. Beavers are present in the area and several beaver ponds currently exist in the Mendenhall River valley.

The Planning Area includes habitat for several species of special conservation concern, including grizzly bear, and woodland bison. Habitat for little brown myotis bats and collared pika is found immediately outside the Planning Area.

The Aishihik population of woodland bison was introduced to the region starting in 1988 (Aishihik Bison Technical Team, 2022). While the population is rebounding and considered among the largest free ranging herds on Earth, it is still in recovery and considered sensitive to habitat loss and human

encounters (Aishihik Bison Technical Team, 2022). In the Planning Area, key habitat for the Aishihik bison herd extends from the Ruby Range near Canyon in the west to past Stoney Creek in the east, staying mostly north of the Alaska Highway, except for a small area near Champagne and Mendenhall Landing.



Wood Bison Aishihik Herd (Photo Credit: Government of Yukon Department of the Environment, Kathi Egii)

There are two key areas of grizzly bear habitat mapped with the Planning Area; one near Haines Junction, that follows the valleys of the Kathleen and Dezadeash Rivers, upstream to the confluence with Aishihik River and the second near Champagne and Moraine Lake, occupying both the wet valley bottoms and dry uplands.

Outside but near the Planning Area, little brown myotis bats have been mapped as present around Haines Junction and collared pika in the alpine areas to the south of Champagne. There are some woodland caribou herds that can be found near the Planning Area; the Ibex herd is immediately to the south and east of Champagne but currently no herds are known to make use of the Planning Area itself as a corridor or habitat.

Birds

Like with mammals, the diversity of bird species in the region is exceptional; with numerous species of waterbirds (e.g., pacific loons, arctic terns), shorebirds such as American golden-plover and the Common snipe found at the larger lakes like Pine Lake. Migrant songbirds such as American robin, American pipit and rusty blackbird are found in the forests and riparian area. Waterfowl, including Yukon geese and trumpeter swans are found around the lakes and wetlands. Raptors such as northern goshawk and great horned owls occupy the woodlands, with golden eagles and gyrfalcons roosting in the alpine areas, along with ptarmigan.

Four bird species have areas of key habitat mapped in the Planning Area, three are of special conservation concern. The first species mapped but not currently a conservation concern is the golden

eagle which are known to use the alpine areas north of the Alaska Highway, between Pine Lake and Cracker Creek. The migratory rusty blackbird on the other hand is considered a species of special concern and is reported to spend time in the wetlands and riparian areas of the Kathleen River Valley; as is the common nighthawk, which can be found around shores of Pine Lake and the community of Haines Junction. Finally, the barn swallow, which can be found in the hills north of the Alaska Highway, west of Mendenhall Landing.

Fish

Native fish species observed in this region include lake whitefish, round whitefish, lake trout, northern pike, and arctic grayling. Additionally, the Takhini River as part of the Yukon River watershed also sustains populations of Inconnu, broad whitefish, least cisco and summer runs of chinook salmon.

3.3 Geohazards

PERMAFROST

Following the retreat of glaciers at the end of the last ice age, permafrost formed in the Dezadeash and Takhini River valleys, which make up most of the Planning Area. West of the Aishihik River, permafrost, meltwater ponds and peat mounds are prevalent on the valley terraces and on the floodplains between Marshall Creek and Aishihik River. To the east and between Champagne and Mendenhall Landing, permafrost and meltwater ponds are prevalent both in valley bottom and higher elevations, though to a much lesser extent on the hills north of the Takhini River. Between the Aishihik River and Champagne, some permafrost has been mapped on the valley terraces but is discontinuous and much smaller in area relative to the other described areas. In general, the risk of permafrost expansion and contraction is greatest in areas with lots of fine silts and clays, along the water courses or near the organic deposits, and wetlands often associated with thermokarst (freeze-thaw) collapses.

FOREST FIRES

Although the heavily vegetated portions of the planning area are susceptible to forest fire, there are also large tracts of land that are sparsely vegetated or situated above the tree line, lowering the overall wildfire risk. Within the last 60 years there have been four wildfires of note that have occurred in the Planning Area, summarized in the *Table 3.2*, below.

The beetle-killed spruce forest in the area presents an unusually high potential for fire severity and spread. Dead spruce trees are more likely to ignite from embers and also spread more embers once they burn. The volume of dry fuel, both standing and on the surface is higher in a spruce-beetle affected forest.

Table 3.2 Recent Forest fires in Planning Area

Year	Location	Area Burned (ha)
1980	Canyon	1306
1990	Canyon	315
1998	Marshall Creek	3712



2021	Champagne	756
------	-----------	-----

FLOODING AND EROSION

Currently, there are no floodplain maps for the Planning Area, but floods and debris flows have occurred and caused damage to infrastructure in the region in the recent years, including to the Alaska Highway (CBC, 2020) and are expected to increase as a potential threat to human development in the region with climate change.

During the period of the spring freshet, some degree of flooding and bank erosion is expected in valley bottoms along the Aishihik, Dezadeash, Mendenhall and Takhini Rivers. Active bank disturbances and the gentle topography of the valley bottoms suggest that the areas around the Aishihik and Dezadeash Rivers are especially at risk to flooding. Additionally, the construction of the Aishik Generating Station led to changes in the flow along the Aishik River. Berms have been built to mitigate the impacts on private landowners, but some properties are still impacted by high water levels especially during spring melt.

4 Land Tenure

4.1 Overview of Land Ownership

As noted earlier in the Report, before the 1890s, the Southern Tutchone people moved through the area, using different camps and routes, depending on the time of year. Once people of European descent began arriving in the Planning Area, the way that land is understood, used, and controlled changed dramatically.

Today, most of the land in the Planning Area is unsurveyed Commissioner’s land controlled and owned by the Government of Yukon. *Table 4.1* below and *Map 5 – Land Tenure* provide more information.

Table 4.1 Land Tenure

Type of Tenure	Number of Parcels	Total Area (ha)	% of Planning Area
Public Land (Controlled by The Government of Yukon)	-	38,677.33	75.58%
First Nations Lands	55	10,928.67	21.36%
Champagne and Aishihik First Nations	53	10,927.45	21.35%
Kwanlin Dün First Nation	2	1.23	0.002%
Private Lands	131	1,566.28	3.06%
TOTAL PLANNING AREA		51,172.28	100%

4.2 Yukon Government Land Use

The Government of Yukon controls nearly 76% of the Planning Area. Through leases, reserves, and other types of dispositions, the Government of Yukon has given authority to others to use specific parcels. Just over 21% of Yukon Government lands fall under some type of land disposition and these are summarized in the table below. An administrative reserve is in place that covers the entire Planning Area prohibiting additional land dispositions during the planning process.

Table 4.2 Summary of The Government of Yukon Land Dispositions

Type of Tenure	Count	Area (ha)
Agreement for Sale	7	19.63
Rural Residential	7	19.63
Easement	3	181.72
Utility	3	181.72
Lease	9	31.42
Commercial	2	14.64

Alaska Highway West Local Area Plan – DRAFT Background Report

Commercial Wilderness - BGO	1	0.37
Industrial	1	1.98
Institutional	1	0.01
Miscellaneous	1	0.98
Quarry	2	4.43
Recreational	1	9.00
Reservation	49	7,982.42
Agricultural	3	1,716.07
Airport	1	10.40
Bridgehead	5	4.67
Environment	1	5.84
Forestry	1	4,744.71
Garbage Dump	1	15.03
Gravel Pit	27	925.42
Heritage	2	63.01
Industrial	4	363.40
Land Claims	1	2.01
Parks & Campground	2	5.40
Rural Residential	1	126.46
TOTAL	68	8,215.19

4.3 CAFN Lands

CAFN is a significant landowner within the Planning Area. There are two large Community parcels (CAFN C-4B and CAFN C-3B) between Pine Lake and Haines Junction. There are several Rural Settlement Blocks (CAFN R-14B, CAFN R-73B, CAFN R-43B, and CAFN R-65B and portions of larger Blocks CAFN R-67A, CAFN R-42B, CAFN R-33B, large CAFN R-1B) which fall within the planning Area. There are also a number of Site-Specific Blocks (S Blocks).

4.4 Private Lands

There are approximately 85 private residential lots in the Planning Area, making up 3% of the total lands. Most of the private lots are held by individuals and used for residential uses. There are also 35 agricultural lots, where people use land for various types of farming or home-based businesses in addition to residential uses. Most of these lots are accessed off the Alaska Highway, while some are accessed using secondary roads or longer driveways.



4.5 Protected Areas

Pine Lake Campground is at the south end of Pine Lake. It offers campsites, a beach, a boat launch, lakeside trails, and a day use area. The Southern Tutchone name for Pine Lake is Tsi Män, which means “red ochre lake,” after the red rock on Paint Mountain.



Pine Lake Campground and Paint Mountain (Photo Credit: Yukon Government)

Kusawa Territorial Park is outside of the Planning Area, but directly to the south. It was established as a Special Management Area under Chapter 10, Schedule A of Kwanlin Dün First Nation and Carcross/Tagish First Nation Final Agreements. This park protects the ancient travel routes and traditional use of the area, which have been used for thousands of years and continue today. Kusawa Lake is called Nakhü Män in Southern Tutchone, which means “rafting across lake”.

Kluane National Park is southwest of the Planning Area. This park includes the St. Elias Mountains and includes seventeen of the country’s 20 tallest mountains, including Mount Logan, Canada’s highest peak. The Southern Tutchone name for Kluane Lake is “Łù’àn Män” meaning “big fish lake”. In 1943, the Kluane Game Sanctuary was established, and local First Nations were denied access to hunting, fishing and trapping in a significant portion of their Traditional Territory. This separation caused their special bond with those lands to break, resulting in a great cultural and personal loss that has now affected five generations. With the implementation of their land claim and the establishment of Kluane National Park and Reserve, they have reasserted their right to carry out traditional activities in the park and the surrounding Kluane Game Sanctuary lands. Kluane National Park & Reserve is designated as a Special Management Area under Chapter 10 of the CAFN Final Agreement. CAFN cooperatively manages the park with Parks Canada through the Kluane National Park Management Board.

5 People and Community

5.1 Residents

Rural living is one of the most common land uses in the Planning Area. There is no official demographic information available, but the area has roughly 130 privately held lots. According to the 2021 Canadian Census, the number of people per household was 2.2 for Haines Junction, 2.3 for Ibex Valley, 2.3 for Whitehorse and 2.4 for the Yukon overall. Using an estimate of 2.2 people per household on the 90 private lots and adding the 22 people who live in Canyon, gives an estimated population 220.

The key residential areas are shown on *Map 1 – Planning Area and Current Land Use*. *Table 5.1* below describes each of the residential areas and gives an estimated population for each area.

Table 5.1 Residential Areas

Name	Description	Number of Lots	Estimated Population
Within the Planning Area			
Pine Lake and Paint Mountain Subdivisions	Pine Lake and Paint Mountain are two residential subdivisions on the west side of Pine Lake. The Pine Lake subdivision was created in the 1990s, for recreational uses. Area Development Regulations govern how these lots can be used. Paint Mountain Road subdivision was created in 2011.	18	40
Marshall Creek Subdivision	This area was developed as an agricultural subdivision and is accessed from Alaska Highway, just outside the municipal boundary. Lots were created between 2010 and 2016. There are several agricultural dispositions and operations in the area.	15	33
Marshall Creek Road	Located along Marshall Creek Road, there are several homes and agricultural dispositions.	7	15
The Yänlin Chemi (Canyon)	The Yänlin Chemi is a CAFN community located where the Aishihik River crosses the Alaska Highway. There are an estimated 22 full-time residents.	NA	22
Canyon Road/Aishihik River	Along the Alaska Highway, between the Aishihik River and Aishihik Road there are a number of residential lots. Many of the lots along Canyon Road are relatively new builds, with most subdivisions taking place between 2015 and 2022.	18	40
Mendenhall Area	There are several residences near Mendenhall Subdivision. Note that Mendenhall Subdivision itself is not included in this tally.	12	26
Other Residential Lots	The remaining Planning Area residents live in lots spread out along the Alaska Highway or accessed via secondary roads.	20	44
TOTAL		90	220
Adjacent to the Planning Area			
Mendenhall Subdivision	Mendenhall Subdivision has approximately 54 lots and was developed in the late 1980s and early 1990s. These lots are governed by Area Development Regulations that specify how these lots are to be used.	54	118
Shadhäla (Champagne)	Shadhäla (Champagne) is a CAFN community located on the Dezadeash River along a traditional trade route between the coast and the interior. This area has long been an important gathering point and	14	17

	trading spot for First Nation people. There are currently 17 people living in Champagne, with 14 occupied dwellings.		
Takhini River Subdivision	The Takhini River subdivision is the newest CAFN community. While the current residential community is new, the location was long used as a summer camp. This area is home to many families with young children and there is a community building with a small community hall, a water treatment facility, a small workshop, the fire truck, and water truck	30	80

5.2 CAFN Communities

CAFN citizens live in Haines Junction, the Yänlin (Canyon), Shadhäla (Champagne), Nàkhu/Takhini (Kusawa/Takhini), Whitehorse and other communities both inside and outside the Yukon. Only the Yänlin (Canyon) is within the Planning Area, whereas the others are outside.

THE YÄNLIN (CANYON)

The Yänlin (Canyon) is located where the Aishihik River crosses the Alaska Highway. Archaeological evidence from the bluff overlooking the community indicates that the area was used by people of the Little Arm Culture between four and ten thousand years ago. Before the building of the highway, the Äshèyi (Aishihik) people of the area also widely used sites around Otter Falls. It was not until later that the current site of Canyon became a permanent and year-round settlement. Canyon has 22 full time residents, with a population that is generally older than other CAFN communities. The traditional name for the settlement, the Yänlin, means “water flowing through the rocks.” A small community grew at Canyon in the early 20th century and today this area offers its residents the quiet lifestyle of a traditional village.

SHADHÄLA (CHAMPAGNE)

Shadhäla, (Champagne) meaning “little sunny mountain,” is located on a bend of Shadhäla Chù (Dezadeash River). The village is located at the intersection of the main north-south and east-west traditional travel routes and has long been an important gathering spot. Families from throughout the Traditional Territory gathered here during their shäkät (seasonal rounds). Käjèt kų and Agunda kų (Crow and Wolf clan houses) were located here. An important main tth’än k’e (burial ground) and spirit houses are on the hillside across from Champagne. Shadhäla is still a cultural hub and active village with year-round residents.

The construction of a trading post in 1902 and the establishment of the boundary between BC and the Yukon (resulting in families from Shäwshe and Neskatahin being forbidden to hunt in their traditional territory that was now in BC) provided the catalyst for people to settle in the community. There are currently 17 people living in here, with 14 occupied dwellings. There is also a community hall (and another older community hall no longer in regular use), a fire hall, an outdoor skating rink, and a playground.



Old Cabins in Champagne (Photo Credit: Explorenorth.com)

NÀKHU/TAKHINI (KUSAWA/TAKHINI)

The Takhini River settlement is one of CAFN's newest communities and is home to many young families. While the current residential community is new, the location was long used as a summer camp. Traditional trails branch out from the site toward Whitehorse, Champagne, and Hutshi. A large forest fire swept through the Takhini area in the 1950s. The first homes were built in this area in the 1990s and there are now 30 homes in the subdivision and just over 80 residents. After Haines Junction, Takhini is CAFN's largest community. An existing subdivision plan showing 70 vacant lots indicates that this area could be home to more residents in the future. There is a municipal style building that houses a small community hall, a water treatment facility, a small workshop, the fire truck, and water truck. Takhini also has an outdoor skating rink, a playground, and a community garden.

HAINES JUNCTION (DAKWÄKÄDA)

Dakwäkäda, Southern Tutchone for 'High Cache', is home to over 200 CAFN citizens and the headquarters of their government. Dakwäkäda is not a traditional community but was the intersection of several important trails. It was a place where local families cached goods, especially the food that had been caught in the area. This is also the administrative centre for CAFN, with the Administration Building, Healing House, Da Kų Cultural Centre, shop buildings, much of the CAFN owned housing, and two apartment buildings located in the community.



Community Feast at Da Kų Cultural Centre During Da Kų Nän Ts'étthèt 2019 (Photo Credit: DakuCulturalCentre.ca)

5.3 Community Buildings and Facilities

There are limited community facilities within the Planning Area. Outside the Planning Area, but nearby there are small community halls located in Champagne, Mendenhall and Takhini. Students attend school in either Haines Junction or Whitehorse.

5.4 Trails and Recreation

The Planning Area provides access to several popular trails and camping areas. Yukoners and visitors travel the corridor on the way to Haines Junction, Yukon's western communities, Haines, Kluane National Park, and Alaska. The entire Highway corridor has beautiful views, with the Kluane range becoming visible near Haines Junction.

Hiking, fishing, dogsledding, snowmobiling, wildlife viewing, skiing, and other activities are popular, especially near Haines Junction. Visitors and locals alike canoe and raft on the Dezadeash, Kathleen and Takhini Rivers; using put-ins at locations throughout the area.

The most popular hiking trails that are within, or partly within the Planning Area are: Paint Mountain, the Tors, and Stony Creek. The popular Spirit Canyon trailhead is just to the east of the Planning Area. Within the Planning Area is the Pine Lake Campground, near Haines Junction, which has 42 campsites, a boat launch, day use area, and trails.

Outside of the Planning Area, are three (3) recreational sites location along the Aishihik Road. The first is the Otter Falls Recreation Site which has a boat launch, trails, day use camping, as well as the Aishihik Campground, with 16 campsites and a boat launch. The second is the Kusawa Lake Campground, with 52 sites, a boat launch and day use area; and the third is the Takhini River Campground with 12 campsites.



View of Pine Lake from Paint Mountain (Photo Credit: yukonhiking.com)

The Kluane National Park and Reserve is located southwest of Haines Junction. This Park has a campground, short interpretive trails, and access to the longer backcountry trails. The Park also includes the icefields in the St. Elias Mountains and is home to Canada's highest peak, Mount Logan. This is a world-class destination that attracts visitors for accessible and remote wilderness tourism experiences.

5.5 Businesses and Commercial Operations

For generations the CAFN people have hunted, trapped, fished and guided in the area. A rich and diverse traditional economy sustained the people for generations and continues today based on strong, deep-seated cultural and spiritual connections to the land and wildlife. CAFN people continue to participate actively in their traditional economy and rely on traditional land use to meet a significant portion of their needs.

There are very few businesses or formal jobs within the Planning Area. In the Canyon/Otter Falls area, there are two businesses currently operating. Dimok Timber LTD, a locally owned sawmill with a wide range of products, and the Otter Falls Truck Stop, which includes a gas station, restaurant and RV park. There are also a range of home-based business in the Planning Area including farms, art galleries, and rental cabins.



Otter Falls Truck Stop (Photo Credit: Otterfallscutoff.com)

There are two commercial tourism operations in the Planning Area. Kwaday dun Kenji (Long Ago People's Place) at Champagne on CAFN lands offers a range of day tours and experiences with a focus on Yukon First Nations culture and heritage. Beyond Expeditions is located west of Mendenhall and offers a range of wilderness tourism opportunities, both in the area and across the Yukon. Kluane National Park also provides commercial guiding opportunities, though guides are not necessarily locals.

6 Infrastructure and Public Safety

6.1 Water and Sewer

There are no piped water and wastewater services in the Planning Area. For drinking water, residents either have private wells or use water delivery. There is a community water system operated by the Village of Haines Junction. Water is trucked to Canyon under an agreement with CAFN and to other residents in the Planning Area at their own cost. There is also a water treatment plant in the Takhini Subdivision, and water is trucked from here to homes in Takhini and Champagne. Outside the Planning Area, Mendenhall has a water treatment plant. Most residences in the Planning Area have their own on-site septic systems; some may also use pump-out systems.

6.2 Solid Waste

There is no solid waste pick-up service within the Planning Area. Residents living in the western part of the Planning Area can pay to use the Regional Solid Waste Facility operated by the Village of Haines Junction. The facility consists of several pits for domestic, compost, metal, brush, and tire waste. A compost area and recycling centre are operated privately by the Haines Junction Recycling Group and are located next to the transfer station. Recycling is shipped to Whitehorse for processing with backhauls from various trucking companies in the territory.

The Canyon landfill site is no longer a disposal facility. It is on CAFN lands and is operated by Yukon Government. The site has been remediated and is now being operated as a waste transfer facility. Facilities have been developed to allow for sorting of waste.

At Champagne, there is a Solid Waste Transfer Station operated by the Government of Yukon to serve local residents. At this site, there are bins to allow for separation of waste and recyclables, and a free store to enable recovery of unwanted materials. The site is unmonitored. Waste is transferred to the City of Whitehorse Waste Management Facility.

Outside the Planning Area, in Takhini, solid waste is currently collected at a transfer area that has bins for disposal with an electric fence to discourage wildlife from entering the area. Waste is transferred to the City of Whitehorse Waste Management Facility.

6.3 Energy

North of the Planning Area at Aishihik Lake is the Aishihik Generating Station, a large hydro plant operated by Yukon Energy. This plant has been in operation since 1975 and produces 25% of total energy made by Yukon Energy. The Aishihik plant is extremely important to Yukon Energy's operations, especially in the winter.

Electricity generated here is moved in a high voltage transmission line from the Aishihik facility south along Aishihik Road and the east roughly along the Alaska Highway to Whitehorse. There is also a transmission line that runs west along the Highway corridor to Haines Junction and beyond.

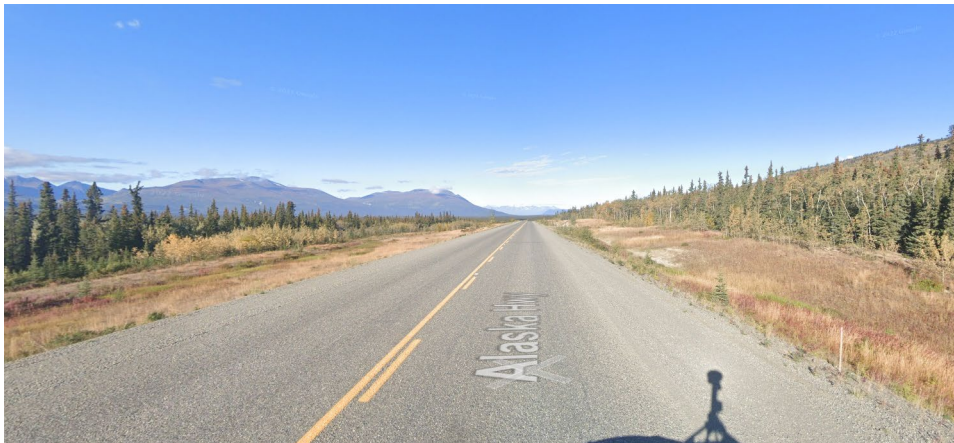
Many, but not all, of the residences in the Planning Area have access to electricity. Areas between Canyon and Haines Junction have access to electricity coming off the transmission line. Electricity is taken down off the high voltage line at Champagne and at Mendenhall to bring power to residences in those areas. From Mendenhall to the eastern boundary of the Planning Area, power lines are accessible and run along the Highway.

6.4 Telecommunications

Cell coverage is spotty throughout the Planning Area. Northwestel owns a fibre optic cable that runs from Whitehorse west along the Highway and, as of 2023, provides service to customers in Haines Junction. Those outside of Haines Junction and rely on slower DSL (digital subscriber line) service. provides service to those in that community. Starlink high-speed satellite internet service became available in the Yukon in late 2022 and some people may be using this service.

6.5 Transportation and Access

The Government of Yukon’s Department of Highways and Public Works (HPW) owns and maintains the Alaska Highway, which is the main road running east to west through the Planning Area. This section of the Highway sees roughly 500 vehicles a day, with significantly more traffic in the summer months. HPW has been undertaking ongoing improvements to the Highway including efforts to widen the road surface, upgrade the driving surface, improve shoulders, and clear vegetation to improve sight lines.



The Alaska Highway near Between Canyon and Champagne (Photo Credit: googlemaps)

HPW is also responsible for the maintenance for local access roads to Pine Lake Subdivision, Marshall Creek Subdivision and Mendenhall. CAFN maintains the road in Canyon, Champagne and Takhini.

These are built to various standards; some are bituminous surface treatments (also known as chip seal) and some are gravel.

6.6 Foothills Pipeline Easement

The Alaska Highway Gas Pipeline easement runs east west through the Planning Area. This easement was granted to TransCanada in 1984 and was part of the Alaska Highway Gas Pipeline project, a proposal that would carry gas from Prudhoe Bay Alaska, through the Yukon and northern British Columbia, eventually linking to existing pipeline infrastructure. The easement has been amended several times, last in 2012 to reflect the projects economics and schedule. The easement is currently undeveloped, is 240 m wide and runs north of the Alaska Highway. TransCanada continues to study the feasibility of this project.

6.7 First Responders

Policing services are provided by the RCMP from either Haines Junction or Whitehorse depending on the specific location of the call and operational requirements.

Ambulance services are provided through Yukon Emergency Medical Services through a combination of full-time employees in Whitehorse and a Haines Junction based local volunteer EMS responders who are paid an honoraria. Ambulances will be dispatched from Whitehorse or Haines Junction depending on the need and operational requirements.

There is a Volunteer Fire Department in Haines Junction. The Department responds to structural and vehicle fires; assists Wildland Fire Management with forest fires; attend at accidents and other scenes when requested. The Fire Hall is co-located with the Ambulance Service, and Kluane Search and Rescue.

There are fire trucks located in Takhini and Champagne however there are no community members with up-to-date training. There is a Fire Hall in Canyon, which stores an old fire truck. There are active volunteer fire departments located in Mendenhall and in Ibex Valley (east of the Planning Area), that could potentially help during fires. Haines Junction's capacity to respond to wildfire suppression is led by the Government of Yukon's Wildland Fire Management Branch.

7 Other Land Uses and Activities

7.1 Agriculture

The Planning Area includes some of the territory's best agricultural lands and there are several farming operations in the Planning Area. In Marshall Creek Agriculture Subdivision, there are several active agricultural operations supported through agricultural land dispositions. There are also two grazing lease agreements and an agricultural disposition near the Mendenhall River. The Planning Area has some of the best agricultural lands in the Yukon, and land dispositions for agriculture area guided by Cultivating Our Future: 2020 Yukon Agriculture Policy.

The Government of Yukon has several agricultural reserves in the Planning Area. Reservation 2004-0043 is 927 ha in size, is located near the existing Marshall Creek Subdivision. It was put in place in 2004 and the Government of Yukon is working with CAFN to develop a plan for this area that will include agri-residential properties and several agricultural lease areas. Reservation 2008-1780 is 758 ha is located south of the Alaska Highway, west of the Mendenhall River. It was an old grazing lease and was put in place in 2008 to hold the land for future grazing agreements or other agricultural planning projects.

There are several herds of wild horses that roam free in the Ibex Valley and through the easternmost section of the Planning Area. Over the years, Yukon government has tried to capture these wild horses as they are a risk to motorists. Some horses have been corralled, but there are reports that some horses remain in the area.

7.2 Hunting and Trapping

Yukon First Nation and non-Indigenous people use the Planning Area for Hunting. Elk, bison and moose and other animals are hunted in the area. CAFN citizens harvest a variety of large and small mammals within the Planning Area, though access to these opportunities are limited by the number of private residences that have 1 km no-hunting buffers around them. More information on wildlife habitat can be found in Section 3.2.

Bison were introduced to the Yukon in the late 1980s as part of a national program to help endangered species recover. Since releasing 170 bison, the herd has grown to between 1,200 and 1,400 animals. The herd's range has also grown to include the areas around Aishihik, Sekulmun and Hutshi lakes. One of the goals of the 2012 Bison Management Plan is to limit the herd's size through hunting. The Bison Core Range overlaps with much of the Planning Area, beginning roughly at the Highway and extending north past Aishihik Lake. Bison hunting is permitted in September and October in a 3 km wide corridor north of the Alaska Highway all along the Planning Area. From November to March, bison hunting is not restricted and is permitted throughout the Planning Area.

Elk was introduced to the Yukon in the late 1940s, with additional animals being added over time. It is estimated that the Takhini herd has approximately 200 animals. The Elk Management Plan aims to keep

the herd healthy, while managing conflicts with agricultural uses and minimize motor vehicle accidents. Elk hunting permit areas overlap with the Planning Area, specifically from Cracker Creek to the Mendenhall River and running on both sides of the Highway. There is an annual lottery for permits to hunt elk in this area.

There are registered trapping concessions on both sides of the Alaska Highway throughout the Planning Area. CAFN citizens have several traplines within and surrounding the Planning Area.

7.3 Forestry

Commercial forest operations have a long history in the region and have provided building materials for road construction, settlement, and mining operations, as well as fuelwood. Since the early 1990s, more than 380,000 hectares of forest in the Southwest Yukon has been affected by the spruce bark beetle. This infestation has dramatically affected the forests in the Planning Area and, in areas that have been affected, the overstory is dead white spruce above a variety of regenerating plant species.

The beetle-killed spruce forest in the area presents an unusually high potential for fire severity and spread. Dead spruce trees are more likely to ignite from embers and also spread more embers once they burn. The volume of dry fuel, both standing and on the surface, is higher in a spruce-beetle affected forest. Managing forest resources to reduce fuel for forests while creating harvesting opportunities has been a priority in the Planning Area.

Several forest management documents are in place to provide guidance to the forest industry. This includes the Strategic Forest Management Plan for CAFN Traditional Territory (2004) and Integrated Landscape Plan for the CAFN Traditional Territory (2006). Several Timber Harvest Plans have been developed for the area. Harvesting under the Pine Lake/Canyon Timber Harvest Project is nearing completion on the south side of the Highway and there are only two active blocks remaining on the north side of the Highway, near Canyon. Harvesting in the Marshall Creek Timber Harvest Project is completed, and road deactivation and reforestation is underway.

There are a number of high-volume personal use fuelwood areas along the highway corridor. There are also a number of permanent sample plots located within the Planning Area that should be maintained (these plots have 20m radius, most of them are set back a fair way from the highway).

The Haines Junction Fuel Abatement Plan (2008) applies to a portion of the Planning Area closest to Haines Junction. This plan identifies how to reduce fire hazard by reducing fuel, prioritizing areas, and suggesting specific techniques such as fire smarting or other treatments. The Haines Junction Community Wildfire Protection Plan (2022) is currently being reviewed under YESAB. This Plan identifies several harvest areas. Wildland Fire Management has also been doing wildfire protection planning for Canyon and Champagne. These areas have fuel reduction activities planned that contribute to a fuel break around Haines Junction.

7.4 Gravel Resources

The Government of Yukon Department of Highways and Public Works (HPW) has a number of active gravel pits both within the Planning Area and adjacent to it. The following table describes the current use of each active gravel pit according to HPW. The Planning Area also includes a number of reserves set aside for potential sources of gravel in the future.

Table 7.1 Gravel Resources

Name	Location	Pit ID	Status	Description
Gravel Resources in the Planning Area				
Pine Lake Municipal	Alaska Highway Km 1573.0	115-A-24	Active	This pit is an active granular reserve roughly 27 ha. Material is very sandy and so not used much for crushing anymore. Several private leases have been issued in the pit to third party contractors.
Marshall Creek Maintenance	Alaska Highway Km 1561.7	115-A-11	Active	This pit is roughly 36 ha and is an active granular reserve with good quality coarse gravel. This pit may be used in future to supply crushed aggregate for road construction but currently the reserve on opposite side of the highway is being used for production.
Marshall Creek	Alaska Highway Km 1561.5	115-A-26	Active	This pit is roughly 24 ha and is an active granular reserve with good quality coarse gravel. This pit is used to supply crushed aggregate for road construction and has several stockpiles on site
Aishihik Turnoff	Alaska Highway Km 1546.5	115-A-03	Closed Reclaimed	This pit was a historical borrow source used for construction and has been depleted, closed and reclaimed.
Alaska Highway Km1614	Alaska Highway Km 1557.4	115-A-01	Open	This pit is an active borrow pit roughly 8 ha and has not been used in very long time. Very little materials remain. The pit was rehabilitated after construction.
N/A	Alaska Highway Km 1533.5	115-A-04	Closed Reclaimed	This pit was a historical borrow source used for construction and has been depleted, closed and reclaimed.
N/A	Alaska Highway Km 1530.5	115-A-18	Open	This pit is a stockpile site, not used in very long time. Material is wet silt not deemed suitable for common borrow material.
N/A	Alaska Highway Km 1525.6	115-A-15	Open	This pit is an active borrow pit, not used in very long time. Used for subbase and common borrow material.
	Alaska Highway Km 1515.8	115-A-25	Open	This pit is an active borrow pit, not used in very long time. Only for common borrow materials, not suitable for crushing.
Champagne Rev. 2	Alaska Highway Km 1515.3	115-A-06	Open	This pit is an active borrow pit roughly 21 ha, not used in very long time. Only for common borrow materials, not suitable for crushing.
Champagne Rev. 1	Alaska Highway Km 1513.4	115-A-05	Open	This pit is an active borrow pit roughly 39 ha, not used in very long time. Only for common borrow materials, not suitable for crushing.
Champagne Rev. 4	Alaska Highway Km 1504.0	115-A-17	Closed	This pit was a historical borrow source used for construction and has now been closed and reclaimed.

7.5 Mining and Mineral Potential

At the present, no economical mineral deposits have been mapped within the Planning Area. Mining claims are granted under a free entry system in the Yukon, meaning that prospectors can explore for minerals on public lands and then stake a claim to acquire rights to those minerals. No claims can be staked on Category A First Nation Settlement Lands, or in Parks and Protected Areas, such as the Pine Lake Campground. Current mining claims can be seen on *Map 5 – Land Tenure*.

The Quartz Mining Land Use Regulation establishes a classification system based on varying levels of mining activity. Class I exploration is considered low impact activity and while notification is required, environmental assessment is not. Class II-IV require government approvals and assessment under the Yukon Environmental and Socioeconomic Assessment Act (YESAA). The guidance and background information provided in a local area plan or any associated zoning regulations would likely be considered during the assessment.

There are four active quartz claims currently mapped within the Planning Area. Three are located immediately adjacent to each other, just to the east of Marshall creek, are about 21 ha each, staked in 2021 and due to expire in 2024. The remaining 20 ha quartz claim is located in the eastern portion of the Planning Area, near Stoney Creek and Stoney Creek Camp; it was staked in 1995 and is due to expire in 2024.

There are also 25 active placer claims in the area, 17 of which are along Stoney Creek, staked between 2018-2021 and due to expire between 2023 and 2025. Another, seven placer claims are along Marshall Creek, which staked between 1998 and 2021, but have expiry dates in 2023. The final, placer claim was staked in 2020 on north-eastern shore of Pine Lake, near the outlet and has an expiry date of 2023.

7.6 Contaminated Sites

There are two contaminated sites within the Planning Area and two near the area. The Construction Camp was identified in 2004 when hydrocarbon staining was observed. Impacted soil was stockpiled on tarp and relocated. Samples indicated that the soil remaining on site contained PHC concentrations below applicable standards. The second site is on the north side of the Alaska Highway at KM 1564.5. In 2001, approximately 300 L of oil was spilt from a truck after a motor vehicle accident. No further action was performed.

There are also two contaminated sites near the Planning Area. In 2013, a home heating fuel tank leaked spilling approximately 100L at Lot 37 in Mendenhall. A relocation permit was issued and 20 cubic meters (m³) of soil was relocated to a land treatment facility. In 2010, a spill of diesel and asphalt oil took place at the Quill Creek Pit. An excavation was performed and roughly 90 m³ of PHC contaminated soil was removed from the site.

8 Plans and Legislation

Local Area Planning is not done in isolation as there are several plans and pieces of legislation that apply to the area that will need to be considered.

Existing Territorial, Federal, and First Nation land use plans, policies, programs, as well as applicable provisions of the CAFN Final Agreement and Self-Government Agreement relevant to the management and planning of the area, are summarized below.

Table 8.1 Relevant Plans and Legislation

Document	Description
CAFN Legislation and Plans	
CAFN Final Agreement	A protected modern treaty agreement that sets out the rights of First Nations within its Traditional Territory. Many chapters of the FA are relevant to planning and management of the Fish Lake area, including: chapters 6 (Access), 11 (Land Use Planning), 12 (Development Assessment), 13 (Heritage), 14 (Water Management), 16 (Fish and Wildlife), 17 (Forest Resources), and 18 (Non-Renewable Resources).
CAFN Self Government Agreement	This agreement sets out the self-governing authority of the First Nation and includes the framework for collaborative planning process such as Local Area Planning.
Integrated Landscape Plan for CAFN Traditional Territory	Completed in 2006, this document is intended to guide the development of timber harvesting and fuel abatement projects.
Strategic Forest Management Plan	This Plan was completed in 2012 and is intended to provide a framework and practical guidelines for forest managers and planners.
Shadhāla Draft Community Land Use Plan	A draft plan completed in 2017 for Champagne and the surrounding areas (has not been approved).
The Government of Yukon Legislation and Plans	
Lands Act	Legislation that governs the sale and lease of Commissioners land; including agricultural uses.
Subdivision Act	Legislation that governs how lands in the Territory can be subdivided.
Lands Regulation	Provides details for the sale, lease, and disposition of Commissions lands.
Historic Resources Act	Legislation that protects the land-based heritage resources that are older than 45 years, abandoned and of historical significance on public lands.
Area Development Act	Legislation to regulate development of lands outside of municipalities.
Parks and Land Certainty Act	Legislation that sets out rules for parks and protected areas, including the Pine Lake Campground.
Agricultural Development Areas Regulation	Regulations that govern land uses on several of the agricultural lots in the Planning Area.
Haines Junction Community Wildfire Protection Plan	A Draft Plan completed in 2022 and is a tool to provide guidance on the challenges, risks, and opportunities surrounding the protection of community values from wildfire.
Species Conservation Plans	There are plans for the Conservation of Grizzly Bears and Wolves and a draft plan underway for the Aishihik Bison herd.

9 Future Development and Growth

9.1 Population Projections

The population in Whitehorse, the Ibex Valley and Haines Junction have been growing steadily, with Haines Junction going from 804 people in 2007 to 909 in 2017. Whitehorse and the surrounding rural areas growing more quickly than the rest of the territory and the Planning Area.

The Yukon Bureau of Statistics (YBS) provides low, medium and high projections of population growth for the Yukon out to 2030. As part of this work, YBS provides a preferred projection based on weighing the medium demographic projection with another projection based on economic factors. The preferred projection indicates a population of just under 56,000 for the Yukon by 2040. Population projections are not available for the Planning Area specifically. We can assume that given the population growth projected for the Yukon, more lots will be needed in the Planning Area to satisfy demand in the coming years.

Yukon government currently has three lots for sale over the counter in Haines Junction. The Government of Yukon's Land Development Branch and the Town of Haines Junction are also working on an extension to the existing country residential subdivision at Willow Acres in Haines Junction, a serviced residential project east of the Da Kų Cultural Centre, and several projects to add residential lots within the Haines Junction municipal boundary.

There was significant interest in residential lots on Canyon Road, and since 2018, ten lots have been created in this area and sold by the Government of Yukon. CAFN and others have raised concerns about lots being developed without more formal subdivision planning being done. The Government of Yukon has a rural residential land reserve east of Mendenhall that was put in place in 2009 to set the land aside for future development.

9.2 Land Suitability Map

A land suitability map has been created to help identify areas that would be suitable for development. These are shown on *Map 6 – Land Suitability*. Terrain suitability for development is shown in three categories: Generally suitable, Conditionally Suitable, and Unsuitable for Development. These suitability classes were assigned according to mapped terrain conditions including surficial geology, soil drainage, slope, and the presence of permafrost or other active geohazards.

Areas classified as “generally suitable” displayed terrain features with slopes generally less than ten percent, having no actively mapped geomorphic hazards (e.g., permafrost or flooding), soils classified as dry or fresh (moderate moisture content), and surficial geology commonly associated with well drained soils and low ice content (e.g., glacio-fluvial gravels).

Area classified as “conditionally suitable” displayed terrain features with slopes between 10 and 20%, soils mapped as moist, surficial geology associated with a high content of silts and clays (e.g., glacio-lacustrine deposits), and areas where specific considerations for construction was needed.

Area classified as “unsuitable for development” displayed terrain features with slopes mapped to being greater than 20%, soils wet with poor drainage, active geomorphic hazards present (e.g., gulley erosion, permafrost collapses, or flooding), and where the surficial geology made for challenging construction (e.g., bedrock outcrops in the hills).

Stantec notes that the results of this terrain suitable mapping are coarse in resolution due to the nature of the data available to generate the maps. Therefore, the maps offer general recommendations to inform further planning in the Alaska Highway’s West local area plan. These recommendations are not absolute, and site-specific considerations should take priority over the generalizations of the terrain suitability.

10 Public Input

Summary of input received will be added after public input has been completed.

11 Planning Considerations

This section will be added after engagement has been completed and based on feedback from CAFN and the Government of Yukon.



12 References

- Environment and Climate Change Canada. (2023, 04 12). *Canadian Climate Normals 1981-2010 Station Data*. Retrieved from https://climate.weather.gc.ca/climate_normals/results_1981_2010_e.html?searchType=stnProx&xtRadius=25&selCity=&selPark=&txtCentralLatDeg=&txtCentralLatMin=0&txtCentralLatSec=0&txtCentralLongDeg=&txtCentralLongMin=0&txtCentralLongSec=0&optProxType=decimal
- Aishihik Bison Technical Team. (2022). *A conservation and action plan for the Aishihik bison (Bison bison)*. Whitehorse, Yukon: Government of Yukon, Department of Environment.
- CBC. (2020, August 19). *Heavy rains in Yukon and northern B.C. cause mudslides, highway closures*. Retrieved from CBC News: <https://www.cbc.ca/news/canada/north/yukon-bc-highways-mudslides-alaska-stewart-cassiar-1.5692716>
- Clague, J., & Rampton, V. (1982). Neoglacial Lake Alesk. *Canadian Journal of Earth Sciences*, 94-117.
- Yukon Ecoregions Working Group . (2004). *Ecoregions of the Yukon Territory*. PARC Technical.
- Yukon Geological Society. (2021). *Yukon Surficial Geology*. Geomatics Yukon.
- Yukon Geological Survey. (2022). *Yukon Bedrock Geology Map*. Geomatics Yukon.