

YESAB

Yukon Environmental and
Socio-economic Assessment Board

Designated Office Evaluation Report

Ukaliq Wilderness - KNPR

Project Number: 2015-0018

Proponent: Ukaliq Wilderness

Assessment Completion Date: February 16, 2015

Haines Junction Designated Office

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Summary

Ukaliq Wilderness (the Proponent) has proposed to conduct guided hiking activities in Kluane National Park and Reserve (KNP&R) for a period of five years. Trips are proposed for up to 10 people, including guides, and to occur as overnight trips. The Proponent estimates up to 3 trips (approximately 14 nights each) between May and October beginning in 2015. The proposed routes are the most common routes and areas traveled to by recreational users and other commercial operators.

The Haines Junction Designated Office provided an opportunity for comment on the Project during the Seeking Views and Information period from January 29th to February 12th, 2015. Comments were submitted by the Kluane First Nation (KFN). The Designated Office identified four valued components in the assessment: fish and wildlife, human and environmental health, visitor experience and heritage resources. Included in heritage resources was also a consideration of potential impacts to traditional harvesting activities. It was determined by the Designated Office that the Project will not result in significant adverse effects to the above-mentioned valued components upon implementation of commitments and mitigations proposed by the Proponent (Appendix A), in addition to compliance with the relevant legislation.

The Decision Body, Parks Canada - Yukon, will review the Recommendation and the accompanying reasons described in this Evaluation Report. The Decision Body will issue a Decision Document within 37 days, as prescribed under s. 2 of the *Decision Body Time Periods and Consultation Regulations*, that will either a) accept the recommendation, b) vary the recommendation, or c) reject the recommendation.

Assessment Outcome

Under s. 56(1)(a) of the Yukon Environmental and Socio-economic Assessment Act, the Haines Junction Designated Office recommends to the Decision Bodies for the Project that the Project be allowed to proceed, as it determined that the Project will not have significant adverse environmental and socio-economic effects in or outside Yukon.

For more information, please contact:

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Title: Manager, Designated Office

Haines Junction Designated Office

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PART A. BACKGROUND

Part A provides the context and background information required for the assessment of the Project. Section 1.0 identifies the requirement for an assessment under the *Yukon Environmental and Socio-economic Assessment Act*, while Sections 2.0 and 3.0 provide information and baseline data for the Project and project area. Section 4.0 identifies the scope of the assessment, including matters that were considered in evaluating the significance of potential effects of the Project.

1.0 REQUIREMENT FOR AN ASSESSMENT

The purpose of the proposed Project is to provide guided tours in KNP&R. While several activities are likely to be undertaken in conjunction with this Project, under s. 47 of the *Yukon Environmental and Socio-economic Assessment Act*, the Project is subject to an assessment by the Haines Junction Designated Office due to the following circumstances:

- The proposed activity is listed in column 1 of Schedule 1 of the *Assessable Activities, Exceptions and Executive Committee Projects Regulations (Activity Regulations)*; and not listed in column 2 as excepted. The proponent proposes to undertake activities listed in Part 12, item 3 of the Activity Regulations. The specific activity is listed as:

"In a national park or park reserve, a recreational activity that is a business within the meaning of section 1 of the National Parks of Canada Businesses Regulations";
- Is proposed to be undertaken in the Yukon; and
- An authorization or the grant of an interest in land by a government agency, independent regulatory agency, municipal government, or First Nation is required for the activity to be undertaken.

Table 1: The Decision Body

Decision Body and the triggering authorizations required for the Project. This information is based on the project proposal and other information submitted to the Designated Office during the assessment.

Decision Body	Authorization Required	Act or Regulation
Parks Canada Agency	Parks Business License	Canada National Parks Act National Parks of Canada Businesses Regulations

2.0 PROJECT DESCRIPTION

2.1 Proponent Information

Proponent: Ukaliq Wilderness

Contact Person: Alex Bigwood

Phone: 902-789-7471

Email: info@ukaliq.com

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Address: 1006 Hwy 10, Cookville, Nova Scotia, B4V 7R1

2.2 Geographical Context

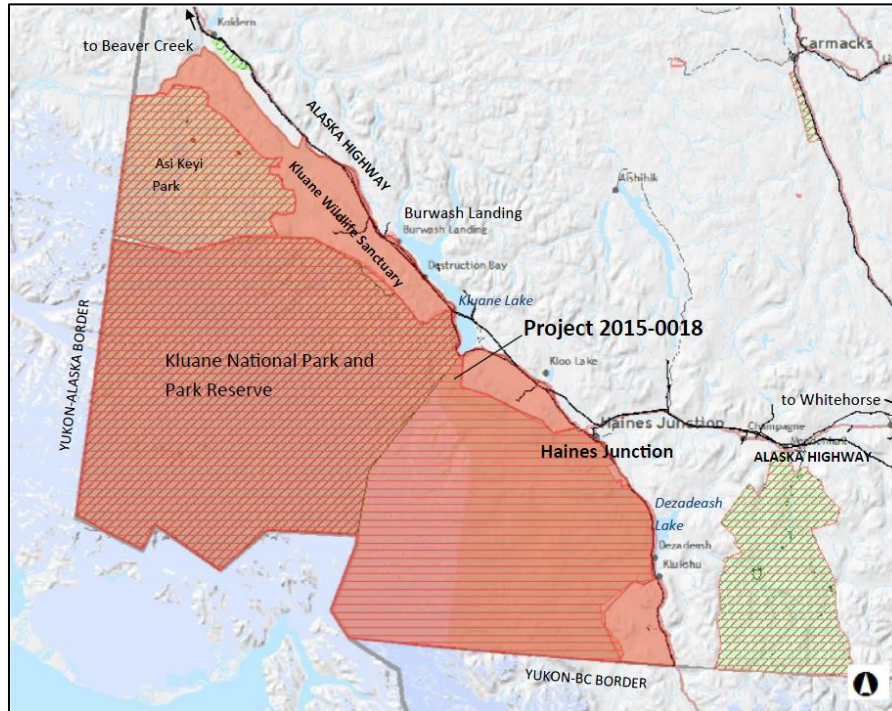


Figure 1: Project Location

Table 2: Project Location, Coordinates and Geographical Parameters

Project Coordinates:	UTM
Map Sheet: 115C15, 115F08, 115F16, 115G03, 115B15, 115G07, 115B11, 115G05, 115B09, 115A05, 115A03,	Zone 7 (except SW UTM Zone 8)
	NW 500718.37301201053E 6845316.771903529N
	NE 566318.7056227815E 6836129.297055606N
	SW 394464.9070154808E 6656352.618072848N
	SE 500784.8611500646E 6684822.354274121N
	Degrees, Minutes, Seconds
	NW 61° 44' 27.24" N 140° 59' 11.04" W
	NE 61° 39' 9.72" N 139° 44' 52.8" W
	SW 60° 1' 50.88" N 136° 53' 38.4" W

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	SE 60° 17' 60" N 140° 59' 8.88" W Decimal Degrees NW 61.7409° N 140.9864° W NE 61.6527° N 139.748° W SW 60.0308° N 136.894° W SE 60.3° N 140.9858° W
First Nation Traditional Territories Involved:	Champagne & Aishihik First Nation, Kluane First Nation, White River First Nation
Drainage Region:	<i>Major Drainage Area:</i> Pacific, Yukon <i>Sub Drainage Area:</i> Alsek, Upper Yukon, Copper <i>Sub-sub Drainage Area:</i> Gulf of Alaska - Yakutat Bay, Dezadeash, Upper White, Donjek, Chitina -
Nearby Watercourses or Waterbodies:	Slims River, Sheep Creek, Bullion Creek, Canada Creek, Alsek River, Kluane Lake, Kathleen Lake, Louise Lake, Donjek River, Copper Joe Creek, St Elias Lake, Mush Lake, and the Dezadeash River

2.3 Project Details

The purpose of the Project is to train and hopefully certify trainees as wilderness guides under the direction of Professional Association of Wilderness Guides and Instructors (PAWGI). The Proponent intends to hike mainly in the Dan Zhùr (Donjek Trail) and Ääy Chù (Slims River Trail) and to offer different levels of difficulty for the trainees based on their respective levels of expertise and fitness.

2.4 Project Scope

The proposed Project is a commercial tourism wilderness guide certification operation and associated activities within KNP&R. The Project involves guided backpacking trips for the training and certification of wilderness guides under the direction of PAWGI. Approximately 3 trips per summer between May and October (approximately 14 nights each) are expected, from 2015 to 2020.

Project Activities:

- Guided overnight backpacking trips on established or existing routes in areas throughout the KNP&R (i.e. Donjek Trail and Slims River Trail) for up to 10 people, including instructors.
- Waste management and drinking water treatment.

3.0 ENVIRONMENTAL AND SOCIO-ECONOMIC SETTING

3.1 Bio-physical Environment

Kluane National Park and Reserve is located within the Boreal Cordillera Ecozone and within the St. Elias Mountains, Mount Logan, Yukon Stikine Highlands, and Ruby Ranges Ecoregions.¹ Two major mountain ranges dominate the Park: St. Elias Mountains and Kluane Ranges, which includes the highest mountains in Canada. The dominant presence and forces of glaciations influence Park ecology. Continuous permafrost underlies the northern portion and discontinuous permafrost underlies the central and southern portions. While ice and snow cover the majority of the Park year-round, approximately 18 percent is vegetated, primarily at its eastern boundaries. The vegetated areas, largely a narrow green belt along the Park’s eastern boundary, are the most productive lands within the Park.²

Wildlife

A variety of wildlife species are found in KNP&R including, moose, Dall Sheep, mountain goats, wolves, lynx, coyotes, a small population of woodland caribou and one of the highest populations of grizzly bears in Yukon. The KNP&R’s grizzly bear population is a significant wildlife resource and constitutes one of the most viable populations of this species in any Canadian national park.³ The sheep population, one of the largest concentrations of Dall sheep in the world⁴, is found mostly in the Park’s northern areas in alpine and sub-alpine zones. The Kluane caribou herd migrates seasonally (in summer) towards KNP&R, but remains mostly within the Kluane Wildlife Sanctuary and the Burwash Uplands.

There are over 180 species of birds present in the Park, including the threatened peregrine falcons (listed on Schedule 1 of the Species at Risk Act [SARA]) and short-eared owls (listed as a species of special concern on Schedule 3 of SARA). Table 3 below lists species at risk within or close to the Park.

Table 3: Species at Risk In or Adjacent to the Park

	Species	Status
Species at Risk listed in Schedule 1 of SARA	Baikal Sedge (<i>Carex sabulosa</i>)	Threatened
	Wood bison (<i>Bison bison athabasca</i>)	Threatened
	Woodland Caribou (<i>Rangifer tarandus caribou</i>)	Special Concern
	Peregrine Falcon (<i>Falco peregrinus</i>)	Special Concern
	Little brown myotis (<i>Myotis lucifugus</i>)	Threatened
	Rusty Blackbird (<i>Euphagus carolinus</i>)	Special Concern
	Short-eared Owl (<i>Asio flammeus</i>)	Special Concern
	Common Nighthawk (<i>Chordeiles minor</i>)	Threatened

¹ Smith et al., 2004
² Henry et al., 2008
³ Ibid
⁴ Ibid

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	Species	Status
Species at Risk listed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) but not yet listed in Schedule 1 of SARA	Grizzly bear, north western population (Ursus arctos)	Special Concern
	Wolverine, western population (Gulo gulo)	Special Concern
	Collard pika (Ochotona collaris)	Special Concern

Many creeks and streams within the Park are silt-laden and therefore, not prime fish bearing areas. However, many streams and lakes support an abundance of fish species such as arctic grayling, lake trout, rainbow trout, whitefish and northern pike. Land-locked Kokanee salmon are found in Kathleen, Louise and Sockeye Lakes.

3.2 Socio-economic Environment

Kluane National Park and Reserve is situated in the southwest corner of the Yukon, within the Traditional Territories of Champagne and Aishihik First Nations (CAFN) and KFN, as well as the White River First Nation (WRFN). The village of Haines Junction (population of approximately 847)⁵ hosts KNP&R's administrative headquarters and the visitor center. Other communities adjacent to the Park include Klukshu, Destruction Bay, and Burwash Landing.

The Park is co-managed by Parks Canada, the Kluane National Park Management Board, and CAFN and KFN. KNP&R is part of four national and provincial parks (Wrangell-St. Elias, Glacier Bay and Tatshenshini-Alsek) that make up the largest international protected area in the world.

First Nations people inhabited unglaciated areas within KNP&R for thousands of years. CAFN and KFN members were excluded from the Park area from the early 1940s until the mid-1970s; however, they are reconnecting with these lands as their members spend more time within the Park.

From May to October of 2010, 134 340 visitors came to Kluane National Park and Reserve. Historical visitation records indicate that there has been a large increase in the number of visitors between 1994 and 2004. This may be due in part to the inclusion of the Alsek River corridor and Kluane National Park and Reserve in the United Nations designation as a World Heritage Site. However, although day-use of the Park has increased, backcountry use has decreased.

The areas in which the Project is proposed are known for their archaeological potential, and traditional activities may also overlap these areas. The land continues to be used and/or travelled upon by First Nations people, for activities such as trapping and hunting and other traditional pursuits.

4.0 SCOPE OF THE ASSESSMENT

The scope of the assessment identifies the matters considered in an assessment. It is determined by considering the activities described in the scope of the Project (identified in Section 2.3) and, based on consideration of the matters set out in s. 42(1) of YESAA, identifying the valued environmental and socio-

⁵ Yukon Bureau of Statistics, 2014

economic components (VESECs) that may be affected by project activities. Views and information submitted during the assessment help to identify values and potential effects of the Project to these values.

4.1 Views and Information Submitted

The Seeking Views and Information (SVI) period was open from January 29th to February 12th, 2015. During this period, the Designated Office received comments from KFN. The following is a summary of the comments received:

Kluane First Nation

KFN reviewed the proposed Project and identified the following three valued components: heritage resources, environment/lands and resources, and fish and wildlife, but included hunting, trapping, and other harvesting activities in their consideration of heritage resources.⁶ KFN provided information, noted potential effects of the Project with respect to the identified values, and suggested mitigations. KFN determined that the Project will likely not result in significant adverse effects to these valued components; however, KFN commented that guided hiking activities should occur in a safe and environmentally responsible manner. KFN's comments will be considered throughout the report.

4.2 Consideration of Significance

In order to mitigate a potential adverse effect, the Designated Office must first find significance. In addressing what may constitute a "significant" adverse effect, the Designated Office considered the following factors:

Magnitude: This refers to the magnitude of the effect. Low magnitude effects may have no impact, while high magnitude effects do have an impact.

Probability: The likelihood that an adverse effect will occur.

Geographic Extent: This refers to the extent of change over the geographic area of a project. The geographic extent of effects can be local or regional. Local effects may have a lower impact than regional effects.

Duration and Frequency: This refers to the length of time the effect lasts and how often the effect occurs. The duration of an effect can be short term or long term. The frequency of an effect can be frequent or infrequent. Short term and/or infrequent effects may have a lower impact than long term and/or frequent effects.

Reversibility: This refers to the degree to which the effect is reversible. Effects can be reversible or permanent. Reversible effects may have lower impact than irreversible or permanent effects.

Context: This refers to the ability of the environment to accept change. For example, the effects of a project may have an impact if they occur in areas that are ecologically sensitive, with little resilience to imposed stresses.

⁶ YOR 2015-0018-014-1

4.3 Consideration of Cumulative Effects

With regards to cumulative effects, subsection 42(1)(d) of the *Yukon Environmental and Socio-economic Assessment Act* (YESAA) instructs Designated Offices to consider:

42(1)(d) the significance of any adverse cumulative environmental or socio-economic effects that have occurred or might occur in connection with the project or existing project in combination with the effects of:

- I. Other existing projects for which proposals have been submitted under subsection 50(1), or
- II. Other existing or proposed activities in or outside Yukon that are known to the Designated Office, Executive Committee or panel of the Board from information provided to it or obtained by it under the Act.

In the situation where the Designated Office determined that there would be no residual effects of the proposed Project on a specific value then a cumulative effects assessment (for that value) was not necessary.

4.4 Other Matters Considered

In addition to the information provided by the Proponent in the Project Proposal,⁷ the Designated Office also considered the reference material contained within the PAWGI website.⁸ The material located on the website provides further information regarding no trace camping principals, emergency protocols as well as human-wildlife conflict that guides must be familiar with or adhere to. As such, PAWGI guides and reference materials are referenced throughout this report where information is considered relevant to the assessment.

4.5 Valued Environmental and Socio-economic Components (VESEC)

The following valued environmental and socio-economic components (VESEC) are the specific values that have been identified by the Haines Junction Designated Office as being adversely affected by the Project:

- Fish and Wildlife (Section 5.0)
- Human and Environmental Health (Section 6.0)
- Visitor Experience (Section 7.0)
- Heritage Resources (Section 8.0)

⁷ YOR 2015-0018-001-1

⁸ Located at <http://pawgi.org/>.

PART B. ASSESSMENT AND REASONS FOR RECOMMENDATION

Part B of this evaluation report presents the effects assessment of the Project on valued components identified in Section 4.0. For each valued component, an overview of the value is provided followed by the effects characterization analysis. Where relevant, measures to reduce significant adverse effects of the Project on the valued component are identified. The effects characterization ends with a conclusion on the key findings of the assessment.

5.0 FISH AND WILDLIFE

5.1 Overview

The proposed Project will provide guided hiking/backpacking trips in several areas within KNP&R. The Park is home to numerous wildlife species and diverse habitats. These species include, but are not limited to, grizzly and black bears, Dall's sheep, mountain goats, wolves, lynx, wolverines, coyotes, moose and caribou. Project activities associated with guided tours, which will take place in groups, have the potential to adversely affect wildlife in the area.

Effects of the proposed Project considered in this section include:

- Effects to fish and wildlife; and
- Human-wildlife conflict.

The Designated Office determined that the proposed Project will not result in significant adverse effects to wildlife upon implementation of the mitigations identified by the Proponent and compliance with relevant legislation. The following sections provide the rationale for this determination.

5.2 Project Effects – Disturbance to Fish and Wildlife

5.2.1 Effects Characterization

The proposed Project includes overnight guided hiking trips into the Park on and off established trails, for overnight backpacking trips. Trips will consist of small groups of up to 10 people, including guides/instructors, in various locations throughout KNP&R, and as such, groups will pass through a variety of habitats for different wildlife species.

Guided hiking tours and the presence of humans in the remote locations within KNP&R may have adverse effects to wildlife from disturbance. Auditory and visual disturbances to wildlife may result in increased stress, disruption to foraging and feeding, nesting, lambing and calving behaviour, and avoidance of an area. Avoidance of an area, in turn, may result in the (temporary) functional loss of habitat. These effects to wildlife within a Park are particularly significant given that ecological integrity is a primary objective of the National Park.

Proponent has indicated that hiking will be most likely limited to Dan Zhùr (Donjek Trail) and Ääy Chù (Slims River Trail). These trails are within Zone 1 Special Management Areas of the Park, which are managed for preservation of unique natural and/or cultural features, including those that are threatened or endangered (e.g. Aisek/Kaskwulsh Grizzly Bear Protection Area). Effects to wildlife in Zone 1 areas that are managed for wildlife values may be less tolerable than other areas of the Park, and these effects will be considered more significant in this regard.

5.2.2 Relevant Proponent Commitments

These identified commitments mitigate specific adverse effects of the Project and are instrumental in the Designated Office's significance determination. These commitments demonstrate the Proponent's efforts under s. 42(1) of YESAA to consider adverse project effects and mitigation measures. These specific commitments mitigate adverse effects and in some cases, may surpass the requirements of other legislation.

- We intend to use bear proof containers, as well as properly educating our guests on proper precautions on how to avoid wildlife conflicts. This includes but is not limited to proper disposal of waste, human waste (at least 100 m from any visible game trail or areas where wildlife frequent), and camping in areas that are also 100 m from any water source, game trail, or wildlife frequented area.
- All participants will use only freeze dried foods to avoid attracting wildlife and follow our strict personal hygiene guidelines that include odorless deodorants.
- Animals that we observe will also be given a wide berth when at all possible with the intention of not disturbing them.

5.2.3 Relevant Legislation

The Haines Junction Designated Office considered the following legislative requirements. The exclusion of other legislation listed here does not preclude compliance; rather, the Haines Junction Designated Office reviewed this specific legislation because of its direct relevance to the environment.

- The *Species At Risk Act (SARA)*;
- The *Canada National Parks Act*:
 - The *National Parks of Canada Businesses Regulations*;
 - The *National Parks of Canada Domestic Animals Regulations*;
 - The *National Parks of Canada Fishing Regulations*;
 - The *National Parks General Regulations*; and
 - The *National Parks Wildlife Regulations*.

5.2.4 Significance Determination

The Designated Office considered the Proponent's commitments, applicable legislation and regulations, and the extent to which Project activities may disturb wildlife in determining significance of disturbance to wildlife within KNP&R.

The Proponent has committed to mitigations that consider the potential effects of human presence (and associated auditory/visual disturbance) in regards to wildlife disturbance. The Proponent commitments are in addition to the *National Parks Wildlife Regulations*, which prohibit the disturbance and destruction of any wildlife within a park, including nests, lairs and dens.

Auditory and visual disturbances, including disturbances during lambing, resulting from the presence of humans on guided trips will be low in magnitude considering the National Parks legislation, the Proponent's commitments, and the short duration of disturbances due to the transitory nature of proposed trips. The Haines Junction Designated Office has determined that the Project will not have significant adverse environmental project effects on fish and wildlife resulting from disturbance to animals or their habitat.

5.3 Project Effects – Human-wildlife Conflict

5.3.1 Effects Characterization

Both grizzly and black bears are known to have high population densities within KNP&R. Bears may become habituated to food sources when they are not deterred by routine activities and noise. Bears habituated to food or garbage become increasingly bold and are often killed in protection of property or life, resulting in direct wildlife mortality. Improper storage and/or disposal of waste have the potential to instigate ongoing wildlife interactions and conflicts, which may result in the systematic removal of wild carnivores through controlled kills.

The proposed Project includes the use of campsites, the storage of domestic wastes and food, and the presence of humans. These activities may all attract bears to the areas that the Proponent plans to frequent. In order to reduce the potential for human-wildlife conflicts and/or property damage, wastes and other attractants must be handled so that they are not accessible to wildlife.

5.3.2 Relevant Proponent Commitments

These identified commitments mitigate specific adverse effects of the Project and are instrumental in the Designated Office's significance determination. These commitments demonstrate the Proponent's efforts under s. 42(1) of YESAA to consider adverse project effects and mitigation measures. These specific commitments mitigate adverse effects and in some cases, may surpass the requirements of other legislation.

- We intend to use bear proof containers, as well as properly educating our guests on proper precautions on how to avoid wildlife conflicts. This includes but is not limited to proper disposal of waste, human waste (at least 100 m from any visible game trail or areas where wildlife frequent), and camping in areas that are also 100 m from any game trail, or wildlife frequented area.
- All participants will use only freeze dried foods to avoid attracting wildlife and follow our strict personal hygiene guidelines that include odorless deodorants.
- Animals that we observe will also be given a wide berth when at all possible with the intention of not disturbing them.
- All waste will be carried out and properly disposed of, with the exception of human bodily waste, of which will be buried in a shallow hole where possible, at least 100 m from any water source, or visible game trail, and areas frequently visited by wildlife.

5.3.3 Relevant Legislation

The Haines Junction Designated Office considered the following legislative requirements. The exclusion of other legislation listed here does not preclude compliance; rather, the Haines Junction Designated Office reviewed this specific legislation because of its direct relevance to the environment.

- The *Canada National Parks Act*:
 - The *National Parks of Canada Businesses Regulations*;
 - The *National Parks of Canada Domestic Animals Regulations*;
 - The *National Parks General Regulations*; and
 - The *National Parks Wildlife Regulations*.

5.3.4 Significance Determination

In considering human-wildlife conflict due to guided backpacking trips, the Designated Office considered the Proponent's commitments and the relevant legislation. The Proponent, as directed under PAWGI, is also required to be familiar with the PAWGI "Quick Reference Guide: Bear Safety".⁹ Combined, the commitments, guide and legislation provide a number of mitigations, restrictions and regulations that act to reduce the likelihood for human-wildlife conflict. In particular, these restrictions and regulations consider attractant management and appropriate minimum distances from wildlife.

For further information, the Proponent is encouraged to refer to Government of Yukon, Environment's Guide "How to Stay Safe in Bear Country" which can be accessed at the following link:

<http://www.env.gov.yk.ca/pdf/howyoucanstaysafe.pdf>

The Haines Junction Designated Office has determined that the Project will not have significant adverse environmental project effects on fish and wildlife due to human-wildlife conflict.

5.4 Residual Effects

Residual effects are those effects that remain from the Project activities after enacting mitigation measures such as Proponent commitments. The residual effects of the Project on wildlife include those effects from auditory and visual disturbance that result from the presence of humans in remote wilderness areas. These effects include habitat avoidance from the potential disturbances from guided tours.

5.5 Cumulative Effects

Spatial and temporal scope

The spatial scope considered consists of areas within the Park in which the Proponent may conduct guiding activities. The temporal scope considered is the duration of the business license (five years).

⁹ PAWGI, 2014

Other activities and projects considered

Other activities that were considered for the cumulative effects assessment include guided and non-guided recreation (hiking, rafting, etc.) activities that occur within KNP&R. Traditional First Nations activities were also considered.

Effects interaction and significance determination

Residual effects from an auditory or visual disturbance may last beyond the period in which the presence of a group of recreationists has caused the disturbance. However, guided groups will not be in any one location for extended periods, and therefore the disturbance would be relatively short. Furthermore, adherence to the *National Parks Wildlife and General Regulations* and the Proponent's commitments will minimize the magnitude of possible disturbances such that they are not significant and will not interact to a significantly adverse degree with the effects of other activities in the area. Currently, KNP&R receives relatively limited use, particularly in backcountry areas. The remoteness and vastness of the Park also limits the degree to which effects from multiple groups of people would interact with each other.

The Haines Junction Designated Office has determined that the Project will not have significant adverse cumulative environmental and socio-economic effects to Fish and Wildlife in connection with the effects of other activities. Therefore, no further mitigation is required.

6.0 HUMAN AND ENVIRONMENTAL HEALTH

6.1 Overview

The proposed Project will occur during summers for a period of five years within Kluane National Park and Reserve, an area largely considered pristine and isolated from human activities. Project activities, such as the disposal and/or storage of solid and human waste, have the potential to adversely affect human and environmental health. Proposed activities may also contribute to the degradation of the environment from increased foot traffic on sensitive terrestrial lands and introduction of invasive species, with subsequent impacts to water, vegetation, soils and wildlife.

Effects of the proposed Project considered in this Section include:

- Effects to human health; and
- Contamination and degradation of the environment.

The Designated Office determined that the proposed Project will not result in significant adverse effects to human and environmental health upon implementation of commitments proposed by the Proponent and compliance with the relevant legislation. The following sections provide the rationale for this determination.

6.2 Project Effects – Effects to Human Health

6.2.1 Effects Characterization

The proposed Project involves camping and travel in remote areas of wilderness. Backcountry travellers on overnight and longer trips will use creeks and rivers as their water source, and pathogens and parasites may be transmitted through the ingestion of untreated water. A number of pathogens may be

carried in and transmitted via human waste, including *E. coli* bacteria and *Giardia*.¹⁰ Transmission is most likely to occur through the ingestion of untreated or unfiltered water from contaminated sources. Effects range from minor gastrointestinal problems associated with some parasites, to kidney failure and death in the more extreme cases.

Parasites can be distributed throughout the environment by humans, pets, and wild mammals, specifically through fecal waste. This may pose health risks to users downstream of contaminated sites. Cases of *Giardia* have previously been reported in Kluane National Park and Reserve.¹¹ Additionally, other health effects include those associated with the risks of backcountry travel, such as heat and cold emergencies (e.g. hyperthermia, hypothermia), wildlife emergencies (e.g. bear encounters discussed in the preceding section), allergic reactions (e.g. stings or bites), etc. These risks are inherent to backcountry travel, but are significantly reduced through careful planning, preparedness, and experience of guides.

6.2.2 Relevant Proponent Commitments

These identified commitments mitigate specific adverse effects of the Project and are instrumental in the Designated Office's significance determination. These commitments demonstrate the Proponent's efforts under s. 42(1) of YESAA to consider adverse project effects and mitigation measures. These specific commitments mitigate adverse effects and in some cases, may surpass the requirements of other legislation.

- Compliance with sustainable outdoor practices, including proper waste management, procedures to avoid water contamination, and water treatment through filtration.
- All waste will be carried out and properly disposed of, with the exception of human bodily waste, of which will be buried in a shallow hole where possible, at least 100 m from any water source, or visible game trail, and areas frequently visited by wildlife.

6.2.3 Relevant Legislation

The Haines Junction Designated Office considered the following legislative requirements. The exclusion of other legislation listed here does not preclude compliance; rather, the Haines Junction Designated Office reviewed this specific legislation because of its direct relevance to the environment.

- *The Canada National Parks Act;*
 - *The National Parks of Canada Businesses Regulations;*
 - *The National Parks Camping Regulations;* and
 - *The National Parks General Regulations, Section 16 (Use of Water Resources).*

6.2.4 Significance Determination

The Designated Office considered the commitments from the Proponent and the Parks Canada regulations, which both address the disposal of human waste, in determining significance of the Project effects on human health. Although the likelihood of ingesting pathogens and parasites is low, the

¹⁰ EPA, 2013

¹¹ Parks Canada, 2015

consequences could have considerable impacts on the health of those affected. However, the Proponent noted that drinking water would be treated prior to consumption.

In addition, all instructors and trainees will have training in Wilderness First Aid or a higher certification (i.e. Red Cross Advanced Wilderness & Remote First Aid for instructors).¹² The guides and trainees are also required to be familiar with the PAWGI Wilderness Guide Manual which speaks to risk and emergency management including the requirement to carry a Personal Locator Beacon, such as a satellite phone, on every multi-day trip.¹³ These measures speak to the preparedness and awareness of the Proponent with respect to risks in the backcountry. The Proponent also committed to appropriate measures for human waste disposal, which will reduce the likelihood of contamination of the surrounding environment.

The Haines Junction Designated Office has determined that the Project will not have significant adverse environmental and socio-economic project effects on human and environmental health.

6.3 Project Effects – Contamination and Degradation of the Environment

6.3.1 Effects Characterization

Contamination of the environment

Multi-day trips into KNP&R could involve the creation of garbage and waste materials, including human waste and grey water. Backcountry trips will also require the use of camping stoves and fuel, which could lead to the accidental or incidental release of contaminants related to this equipment into the environment.

Waste materials and fuel products can cause contamination of the environment, including water and soils, as wastes break down and/or decompose. In addition to being unsightly, solid waste can create hazards to small and large wildlife as they may ingest or become trapped or entangled in refuse.

Degradation of the environment

Degradation of the environment can result from erosion (on and off trails), compaction of soils, and trampling of vegetation. In particular, wet soils, steep slopes, riparian areas, and alpine tundra environments are particularly susceptible to degradation from foot-traffic. The overuse or misuse of trails and informal routes by groups of hikers may result in their degradation. Degradation includes trail erosion, trail braiding, vegetation trampling, destruction of sensitive plants, and soil erosion. Erosion can also lead to the increased sedimentation of waterways, resulting in adverse effects to water resources. Traveling on trails within or through riparian areas and water crossings presents an increased risk of effects to water courses via sedimentation and erosion. The use or overuse of campsites, and/or improperly located campsites, may result in similar effects.

Introduction of Invasive Species

Degradation of the environment may also occur from the introduction of invasive species. Invasive species result in environmental and socio-economic effects when they replace, inhibit or out-compete natural species. Invasive species can include non-native plants, insects, mollusks, fish, etc., and can

¹² PAWGI, 2014

¹³ PAWGI, 2013

occur in terrestrial or aquatic environments. This Section will discuss effects due to invasive plant species as effects and the mode of spreading invasive plants is generally similar to those of other invasive species.

Invasive plants displace native vegetation (used as forage and shelter by wildlife and for nutritional, cultural and medicinal purposes by humans), ultimately damaging native ecosystems and reducing biodiversity.¹⁴ Seeds and other parts of plants can attach themselves to clothing, gear, fur, hiking boots, and vehicles resulting in dispersion over large distances and infestations in new areas.

Invasive species may reduce recreational and landscape aesthetics as infestations can make trails impassable or reduce enjoyment of natural areas.¹⁵ Some invasives may have burrs, spines and/or prickles that can puncture thick materials, such as bike tires, or cause physical discomfort, sometimes resulting in infection when stepped on. Invasive plants can also alter fire intensity and frequency, soil chemistry, and attract pests.¹⁶

Areas most often affected by invasive plants include agricultural land, transport corridors and other disturbed areas as well as waterbodies. Once established, invasive plants are costly and difficult to remove.¹⁷ Exacerbating the problem is their typically fast growth rates, prolific seed production or vegetative reproduction, irregular germination ability allowing them to outcompete native species, and their ability to produce toxins to limit grazing.¹⁸

It is important that guides and clients recognize invasive species and take precautions to prevent the introduction of invasive species to new areas. This can be accomplished by ensuring gear, pets and people do not carry seeds or other invasive species.

6.3.2 Relevant Proponent Commitments

These identified commitments mitigate specific adverse effects of the Project and are instrumental in the Designated Office's significance determination. These commitments demonstrate the Proponent's efforts under s. 42(1) of YESAA to consider adverse project effects and mitigation measures. These specific commitments mitigate adverse effects and in some cases, may surpass the requirements of other legislation.

- Compliance with sustainable outdoor practices, including proper waste management, procedures to avoid water contamination, and water treatment through filtration.
- All waste will be carried out and properly disposed of, with the exception of human bodily waste, of which will be buried in a shallow hole where possible, at least 100 m from any water source, or visible game trail, and areas frequently visited by wildlife.
- The use of stoves instead of fires, the avoidance of sensitive areas, small groups of people and low frequency use of the area.
- We do not intend to use campfires at any time, but stoves. We also have a strict policy of non-smoking, and do not allow it at any time.

¹⁴ Yukon Invasive Species Council. 2010.

¹⁵ Invasive Species Council of British Columbia, 2014

¹⁶ YISC, 2010

¹⁷ Ibid

¹⁸ Invasive Species Council of British Columbia, 2014

- The use of small footprint tents.

6.3.3 Relevant Legislation

The Haines Junction Designated Office considered the following legislative requirements. The exclusion of other legislation listed here does not preclude compliance; rather, the Haines Junction Designated Office reviewed this specific legislation because of its direct relevance to the environment.

- The *Canada National Parks Act*;
 - The *National Parks of Canada Businesses Regulations*;
 - The *National Parks Camping Regulations*; and
 - The *National Parks General Regulations*, Section 16 (Use of Water Resources).

6.3.4 Significance Determination

The Proponent has made several commitments with respect to the storage, handling and disposal of solid and human waste. These commitments will reduce the likelihood of contaminating the surrounding environment from poor practices and the accidental release of contaminants. Furthermore, legislation under the *Canada National Parks Act* prohibits the depositing of garbage within KNP&R; this further reduces the likelihood that wastes related to guided tours would contribute to contamination of the environment such that adverse effects, should they occur, will not be significant.

With respect to degradation of the environment, the Proponent's commitments (e.g. avoidance of sensitive area) will reduce the magnitude of effects related to soil compaction, erosion and damage to vegetation. Furthermore, the Project's activities in remote areas that are relatively infrequently visited is such that adverse impacts would be low in magnitude, and not significant.

In regards to invasive species, because the Project's activities will occur in remote areas that are largely undisturbed, the likelihood of introducing invasive plants will be low, and not significant. The Proponent is, however, encouraged to refer to the Yukon Invasive Species Council guide "Why Should I Care About Invasive Species?", which can be accessed at the following link:

<http://www.yukoninvasives.com/resources1.html>. This guide may provide further information that is useful for the backcountry user.

The Haines Junction Designated Office has determined that the Project will not have significant adverse environmental project effects on human and environmental health.

6.4 Residual Effects

Residual effects are those effects that remain from the Project activities after enacting mitigation measures including Proponent mitigations. The residual effects of Project activities include the incidental, accidental, or deliberate deposit of litter/waste into the environment. Residual effects may also include effects to the environment from the degradation of trails and damage to soils and vegetation and the introduction of invasive species.

6.5 Cumulative Effects

Spatial and temporal scope

The spatial scope considered consists of areas within the Park in which the Proponent may conduct guided hikes and camp.

The temporal scope considered is the duration of the business licence (five years), and a period beyond (10 years) in which the residual effects from the Project may persist.

Other activities and projects

Other activities that were considered for the cumulative effects assessment include guided and non-guided recreation activities (hiking, skiing, etc.) that occur within KNP&R. Traditional First Nations activities were also considered.

Effects interaction and significance determination

The relatively low frequency of trips into the backcountry among the several different destinations will reduce the cumulative amount of foot traffic and human waste in any one given area. Similarly, the relatively sparse amount of activity spread out throughout the Park's system of trails and routes disperses the extent to which effects will be adverse with respect to trail/ground erosion and degradation.

Other guided tours within the Park are also subject to the terms and conditions of the Parks Canada business licences, and therefore must conduct their activities in accordance to the relevant legislation (e.g. not leaving waste behind). The small amount of activity within a large area reduces the magnitude and extent of adverse effects such that they do not interact significantly with each other.

The Haines Junction Designated Office has determined that the Project will not have significant adverse cumulative environmental and socio-economic effects to human and environmental health in connection with the effects of other activities. Therefore, no further mitigation is required.

7.0 VISITOR EXPERIENCE

7.1 Overview

The proposed Project is planned to occur in Kluane National Park and Reserve where visitors anticipate and expect experiences that are not visibly impacted by human activities. The proposed Project includes wilderness travel (i.e. guided group hikes and snowshoeing) and the management of solid waste associated with these activities.

The assessment on this valued component considers possible adverse effects to visitors' experiences because of proposed Project activities.

Effects of the Project to visitor experience that have been considered include:

- Negative perception of human presence and activities in national parks; and
- Impacts to the experiences of other users.

The Designated Office determined that the proposed Project will not result in significant adverse effects to visitor experience upon implementation of commitments identified by the Proponent and compliance with the relevant legislation. The following sections provide the rationale for this determination.

7.2 Project Effects – Impacts to Visitor and Park User Experience

7.2.1 Effects Characterization

Adverse effects to visitor experience include the negative perception of human presence due to a decreased sense of the wilderness experience. Project activities within KNP&R could lead to traces of human activity (e.g. waste/garbage, evidence of campfires, cairns, etc.) remaining within the Park. The presence of litter and waste can affect other users' experience within a national park by creating visual pollution and a negative perception regarding the human presence in remote areas. In addition, the presence of groups and their associated activities, such as the building of stone cairns and blazing trees, could affect the perception of wilderness that other users may expect. Large groups could generate substantial amounts of noise, which could be a disturbance to other groups and to wildlife, which in turn could affect wildlife viewing opportunities. However, as noted in the previous Section and presented below, the Proponent has made several commitments concerning leaving no trace, thereby reducing the visibility of their footprint.

7.2.2 Relevant Proponent Commitments

These identified commitments mitigate specific adverse effects of the Project and are instrumental in the Designated Office's significance determination. These commitments demonstrate the Proponent's efforts under s. 42(1) of YESAA to consider adverse project effects and mitigation measures. These specific commitments mitigate adverse effects and in some cases, may surpass the requirements of other legislation.

- All waste will be carried out and properly disposed of, with the exception of human bodily waste, of which will be buried in a shallow hole where possible, at least 100 m from any water source, or visible game trail, and areas frequently visited by wildlife.
- The use of stoves instead of fires, the avoidance of sensitive areas, small groups of people and low frequency use of the area.
- Compliance with sustainable outdoor practices, including proper waste management, procedures to avoid water contamination, and water treatment through filtration.
- We fully intend to avoid using the same area as other persons/operators while on trips/expeditions. It would also be contradictory to our clients for a true, undisturbed Wilderness, and in a solitude environment. We would also expect other operators needs to be similar.

7.2.3 Relevant Legislation

The Haines Junction Designated Office considered the following legislative requirements. The exclusion of other legislation listed here does not preclude compliance; rather, the Haines Junction Designated Office reviewed this specific legislation because of its direct relevance to the environment.

- The *Canada National Parks Act*:
 - The *National Parks General Regulations* (Preservation of Property, Use of Water Resources, Prevention of Nuisance, Prohibited Conduct); and
 - The *National Parks of Canada Businesses Regulations*.

7.2.4 Significance Determination

The *National Parks General Regulations* include prohibitions and restrictions related to human behaviour that would disturb or interfere with other users in the Park. The Proponent has also made commitments that will minimize, if not eliminate, any evidence of their presence on and off designated trails (e.g. no trace of any human presence or environmental damage)¹⁹, reducing any adverse effects of the Project related to the visitor experience of others.

Although groups may come into contact with other groups and individuals, due to the short duration of interactions between users of the area, and the relatively limited number of backcountry users in the Park, the magnitude and likelihood of adverse effects to visitor experience will be minimal.

The Haines Junction Designated Office has determined that the Project will not have significant adverse socio-economic effects to visitor experience.

7.3 Residual Effects

Residual effects are those effects that remain from the Project activities after enacting mitigation measures including Proponent mitigations. The residual effects of the Project are the incidental, accidental, or deliberate deposit of litter/waste into the environment, and conflict with other users' enjoyment of the land.

7.4 Cumulative Effects

Spatial and temporal scope

The temporal scope includes the length of the Parks Canada business license (5 years), and the spatial scope includes all areas in which the Proponent may conduct guided trips.

Other projects and activities

Other activities and projects within Kluane National Park and Reserve that could affect visitor and First Nations experience include commercial, recreational, and traditional uses.

Effects interaction and significance determination

Visitor experience is limited to the time in which an individual is within Kluane National Park and Reserve, which is typically a brief period of time in which the visitor is travelling along a trail or route. Any adverse effect to an individual's experience due to encounters with others would not last long, and not significantly affect their wilderness experience in the context of the large, remote and uninhabited KNP&R. Further, there is no indication that KNP&R currently experiences issues with crowding or other negative visitor experiences, as are sometimes found in other Parks, particularly in front-country use areas.

The Haines Junction Designated Office has determined that the Project will not have significant adverse cumulative socio-economic effects to visitor experience in connection with the effects of other activities. Therefore, no further mitigation is required.

¹⁹ PAWGI, 2013

8.0 HERITAGE RESOURCES

8.1 Overview

The proposed Project is located in areas of known archaeological potential where traditional activities have occurred historically and are ongoing. The Project areas include terrain and locations that have been correlated with historic land use by First Nations for hundreds or thousands of years, invariably resulting in the presence of heritage resources. The land has also been used and/or travelled upon in the recent past by First Nations people, trappers, explorers, prospectors, hunters and recreationists. Further, for the purposes of this assessment, the Designated Office has also considered traditional harvesting and cultural history as heritage resources that could be adversely impacted by project activities.

Effects of the proposed Project that have been considered with respect to heritage resources include:

- Damage or destruction of heritage resources; and
- Impacts to traditional harvesting activities.

The Designated Office has determined that the proposed Project will not result in significant adverse effects to heritage resources upon implementation of mitigations identified by the Proponent and compliance with the relevant legislation. The following section provides the rationale for this determination.

8.2 Project Effects – Damage or Destruction of Heritage Resources

8.2.1 Effects Characterization

Project activities that could affect heritage resources include hiking (mostly off-trail hiking) and the use of non-designated campsites (e.g. along shorelines), as well as visits and use of known heritage sites, such as old cabins.

Any activity that involves ground disturbance may result in the damage or destruction of items of historical or heritage value. Heritage resources include artefacts related to human activities. A portion of the value of these resources rests within their context upon the landscape in which they are located, in essence, when they are *in situ*. Once disturbed or removed the value cannot be restored. As a result of recent glaciations and the relatively short time humans have been present in the Project area, heritage resources are predicted to be on, or near the surface of the ground.

8.2.2 Relevant Proponent Commitments

These identified commitments mitigate specific adverse effects of the Project and are instrumental in the Designated Office's significance determination. These commitments demonstrate the Proponent's efforts under s. 42(1) of YESAA to consider adverse project effects and mitigation measures. These specific commitments mitigate adverse effects and in some cases, may surpass the requirements of other legislation.

- Avoidance of sensitive areas whenever possible.
- Proper coaching and education of guests to ensure no artifact or sensitive area is disturbed as well as nothing being removed from the land.

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- Our intention is to work with First Nation when at all possible to avoid any conflict. This includes if necessary not conducting expeditions in the requested areas during the last two weeks of July and first week of August.
- Although our certification process followed by our guides, and guide trainees on the trips includes a Cultural Interpretation Module, we are completely open to working with First Nations to deliver our clients proper information.

8.2.3 Relevant Legislation

The Haines Junction Designated Office considered the following legislative requirements. The exclusion of other legislation listed here does not preclude compliance; rather, the Haines Junction Designated Office reviewed this specific legislation because of its direct relevance to the environment.

- The *Canada National Parks Act*,
 - The *National Parks General Regulations* (Preservation of property);
- Terms and conditions of the Parks Business License;
- Champagne and Aishihik First Nations Final Agreement, Chapter 13 - Heritage; and
- Kluane First Nation Final Agreement, Chapter 13 - Heritage.

8.2.4 Significance Determination

In determining the significance of effects, the Designated Office considered the commitments made by the Proponent, the application of relevant legislation and comments received during the assessment.

Heritage resources hold intrinsic value as objects, but also hold value due to their relation to a First Nation's culture and traditions. If important resources are damaged or destroyed by project activities, the magnitude of such an effect is high and the nature of heritage resources is such that their destruction is permanent and not reversible.

However the likelihood of disturbing heritage resources is considered low for the Project. The Proponent has indicated that hiking activities will occur on known trails; some off-trail hiking may nonetheless occur. The likelihood of encountering unknown heritage resources on existing trails is low, while the duration and frequency of hiking off-trail is short and infrequent, thereby reducing the likelihood of disturbance while off-trail. In addition, the Proponent's commitments demonstrate an awareness of the presence of cultural and historical values in KNP&R, and has committed to not remove or disturb any resources that they come across. Further to the Proponent's commitments, relevant legislation such as the *National Parks General Regulations* prohibits the damage or destruction of any prehistoric or historic artefact or structure within the Park.

As a precautionary note, in conjunction with the above commitments and legislation, the Proponent is also encouraged to refer to the "Handbook for the Identification of Heritage Sites and Features" which can be assessed at the following link: http://www.tc.gov.yk.ca/heritage_guidelines.html. This handbook may provide further information to help guides and clients identify heritage resources if found. The Proponent is also encouraged to contact the Heritage Department of the First Nation whose Traditional Territory they are travelling in if any heritage resources are found, as First Nations value being informed of such findings.

In summary, the small likelihood of encountering unknown heritage resources on trails and little time spent off-trails, in combination with the applicable legislation and Proponent commitments, will reduce or eliminate the significant adverse effects related to heritage resources. The Haines Junction Designated Office has therefore determined that the Project will not have significant adverse socio-economic project effects on heritage resources.

8.3 Project Effects – Impacts to Traditional Harvesting Activities

8.3.1 Effects Characterization

Kluane First Nation expressed the concern that KFN citizens could be negatively affected by park visitors while carrying out hunting and other traditional harvesting/gathering activities, such as via disturbance to these activities and/or visitors not maintaining a respectful distance, taking photographs, etc. To this end, KFN recommended that the Proponent check with KFN and KNP&R prior to trips to understand when and where KFN citizens may be encountered engaged in such activities, refrain from taking photographs, and to give respectful space.

8.3.2 Relevant Proponent Commitments

These identified commitments mitigate specific adverse effects of the Project and are instrumental in the Designated Office's significance determination. These commitments demonstrate the Proponent's efforts under s. 42(1) of YESAA to consider adverse project effects and mitigation measures. These specific commitments mitigate adverse effects and in some cases, may surpass the requirements of other legislation.

- Our intention is to work with First Nation when at all possible to avoid any conflict. This includes if necessary not conducting expeditions in the requested areas during the last two weeks of July and first week of August.
- Although our certification process followed by our guides, and guide trainees on the trips includes a Cultural Interpretation Module, we are completely open to working with First Nations to deliver our clients proper information.

8.3.3 Relevant Legislation

The Haines Junction Designated Office considered the following legislative requirements. The exclusion of other legislation listed here does not preclude compliance; rather, the Haines Junction Designated Office reviewed this specific legislation because of its direct relevance to the environment.

- *The Canada National Parks Act*,
 - *The National Parks General Regulations* (Preservation of property);
- Terms and conditions of the Parks Business License;
- Champagne and Aishihik First Nations Final Agreement, Chapter 10 – Special Management Areas, Schedule A, 1.0); and
- Kluane First Nation Final Agreement, Chapter 10 – Special Management Areas, Schedule C, 1.0.

8.3.4 Significance Determination

The Designated Office has determined that there is a low likelihood for significant adverse effects to occur because of any overlap/encounters between the Proponent's activities and harvesting activities. First, any overlap is likely to be short-term in duration, as groups tend to travel through the region. Second, commercial tour operators and all other registered backcountry users are provided with information from KNP&R²⁰ as a standing advisory regarding First Nations harvesting rights and how to behave when/if harvesting activities are encountered. Therefore, the Proponent will already have been advised of the potential for this type of shared use of the Park, as well as mitigation for such overlap with harvesting activities, reducing both the likelihood and magnitude for disruptive behaviours. Finally, as the Park is managed both for the use and enjoyment of visitors and for continued use by First Nation harvesters, effects resulting from the incidental overlap of these activities are considered socially acceptable in the context of such approved shared use.

The Haines Junction Designated Office has determined that the Project will not have significant adverse socio-economic project effects on heritage resources and traditional harvesting rights.

8.4 Residual Effects

Residual effects are those effects that remain from the Project activities after enacting mitigation measures including Proponent mitigations and compliance with legislation. The residual effects of the proposed activities include the incidental/accidental discovery of artefacts, damage or destruction of a heritage resource, and the accidental/deliberate removal of artefacts from their *in situ* context.

8.5 Cumulative Effects

Spatial and Temporal Scope

The spatial scope includes the areas in which the Proponent may conduct guided trips. The temporal scope is in perpetuity, as once a heritage resource is damaged or destroyed, its value is changed permanently. The impacts to traditional harvesting activities may also be long-term (e.g. 5 – 25 years) as alienating harvesters from a region can result in a longer-term loss/avoidance of harvesting areas.

Other activities and projects considered

Residual effects are those effects that remain from the Project activities after enacting mitigation measures including Proponent mitigations. Activities within Kluane National Park and Reserve that could affect heritage and cultural resources include commercial, recreational, scientific (research) and traditional uses.

Effects interaction and significance determination

Impacts to heritage and cultural resources are generally localized to discrete locations. The geographical extent of residual effects is limited to the area in which Project-related activities would occur. Heritage resources found along main arterial routes/corridors, and popular routes are most likely to suffer cumulative effects such as deterioration, erosion, vandalism, etc. However, there is limited backcountry

²⁰ Parks Canada, 2014

use in comparison to other regions, and no evidence to suggest that heritage resources (tangible artefacts, etc.), are currently at risk of destruction.

Similarly, with respect to traditional harvesting activities, there is also no information or evidence to suggest that current recreational use of Kluane National Park and Reserve is negatively affecting traditional harvesting activities. Currently, all registered backcountry users and commercial operators are provided with information regarding the standing advisory for traditional harvesting activity at any time of year, and respectful behaviour when overlapping harvesting activity. Given the limited and declining extent of backcountry use, there is a low likelihood for adverse cumulative effects in this regard. Further, given the information provided to all registered users, effects are also likely to be short-term/temporary, and of low magnitude.

The Haines Junction Designated Office has determined that the Project will not have significant adverse cumulative socio-economic effects to Heritage Resources in connection with the effects of other activities. Therefore, no further mitigation is required.

9.0 CONCLUSION OF THE ASSESSMENT

The Haines Junction Designated Office has given full and fair consideration to information received during this assessment, as per s. 39 of YESAA. The Haines Junction Designated Office has also taken into consideration the matters referred to in s. 42(1) of YESAA.

Under s. 56(1)(a) of the Yukon Environmental and Socio-economic Assessment Act, the Haines Junction Designated Office recommends to the Decision Bodies for the Project that the Project be allowed to proceed, as it determined that the Project will not have significant adverse environmental and socio-economic effects in or outside Yukon.

Appendix A RELEVANT PROPONENT COMMITMENTS

The following is a compilation of relevant commitments proposed by the Proponent that were considered by the Haines Junction Designated Office because they contribute to the mitigation of significant adverse effects of the Project. The inclusion of these commitments was essential to the final determination of whether a specific project effect was determined to be significantly adverse. The recommendation is based on the understanding that they will be reflected as terms and conditions of the Proponent's permit.

Fish and Wildlife – Disturbance to Fish and Wildlife

- We intend to use bear proof containers, as well as properly educating our guests on proper precautions on how to avoid wildlife conflicts. This includes but is not limited to proper disposal of waste, human waste (at least 100 m from any visible game trail or areas where wildlife frequent), and camping in areas that are also 100 m from any water source, game trail, or wildlife frequented area.
- All participants will use only freeze dried foods to avoid attracting wildlife and follow our strict personal hygiene guidelines that include odorless deodorants.
- Animals that we observe will also be given a wide berth when at all possible with the intention of not disturbing them.

Fish and Wildlife – Human-wildlife Conflict

- We intend to use bear proof containers, as well as properly educating our guests on proper precautions on how to avoid wildlife conflicts. This includes but is not limited to proper disposal of waste, human waste (at least 100 m from any visible game trail or areas where wildlife frequent), and camping in areas that are also 100 m from any game trail, or wildlife frequented area.
- All participants will use only freeze dried foods to avoid attracting wildlife and follow our strict personal hygiene guidelines that include odorless deodorants.
- Animals that we observe will also be given a wide berth when at all possible with the intention of not disturbing them.
- All waste will be carried out and properly disposed of, with the exception of human bodily waste, of which will be buried in a shallow hole where possible, at least 100 m from any water source, or visible game trail, and areas frequently visited by wildlife.

Human and Environmental Health – Effects to Human Health

- Compliance with sustainable outdoor practices, including proper waste management, procedures to avoid water contamination, and water treatment through filtration.
- All waste will be carried out and properly disposed of, with the exception of human bodily waste, of which will be buried in a shallow hole where possible, at least 100 m from any water source, or visible game trail, and areas frequently visited by wildlife.

Human and Environmental Health – Contamination and Degradation of the Environment

- Compliance with sustainable outdoor practices, including proper waste management, procedures to avoid water contamination, and water treatment through filtration.

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- All waste will be carried out and properly disposed of, with the exception of human bodily waste, of which will be buried in a shallow hole where possible, at least 100 m from any water source, or visible game trail, and areas frequently visited by wildlife.
- The use of stoves instead of fires, the avoidance of sensitive areas, small groups of people and low frequency use of the area.
- We do not intend to use campfires at any time, but stoves. We also have a strict policy of non-smoking, and do not allow it at any time.
- The use of small footprint tents.

Visitor Experience

- All waste will be carried out and properly disposed of, with the exception of human bodily waste, of which will be buried in a shallow hole where possible, at least 100 m from any water source, or visible game trail, and areas frequently visited by wildlife.
- The use of stoves instead of fires, the avoidance of sensitive areas, small groups of people and low frequency use of the area.
- Compliance with sustainable outdoor practices, including proper waste management, procedures to avoid water contamination, and water treatment through filtration.
- We fully intend to avoid using the same area as other persons/operators while on trips/expeditions. It would also be contradictory to our clients for a true, undisturbed Wilderness, and in a solitude environment. We would also expect other operators needs to be similar.

Heritage Resources – Damage or Destruction of Heritage Resources

- Avoidance of sensitive areas whenever possible.
- Proper coaching and education of guests to ensure no artifact or sensitive area is disturbed as well as nothing being removed from the land.
- Our intention is to work with First Nation when at all possible to avoid any conflict. This includes if necessary not conducting expeditions in the requested areas during the last two weeks of July and first week of August.
- Although our certification process followed by our guides, and guide trainees on the trips includes a Cultural Interpretation Module, we are completely open to working with First Nations to deliver our clients proper information.

Heritage Resources – Impacts to Traditional Harvesting Activities

- Our intention is to work with First Nation when at all possible to avoid any conflict. This includes if necessary not conducting expeditions in the requested areas during the last two weeks of July and first week of August.
- Although our certification process followed by our guides, and guide trainees on the trips includes a Cultural Interpretation Module, we are completely open to working with First Nations to deliver our clients proper information.

Appendix B REFERENCES

All references to documents on the YESAB Online Registry (YOR) can be found by searching for the Project and document number on the YOR at <http://www.yesab.ca/registry>.

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