



Tłıchǫ Government

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October 11, 2017

Mark Cliffe-Phillips
Executive Director
Mackenzie Valley Environmental Impact Review Board
200 Scotia Centre
Box 938, 5102-50th Ave

Re: Technical Report for the Tłıchǫ All-Season Road (EA-1617-01)

Dear Mr. Cliffe-Phillips,

The Tłıchǫ Government is providing the Mackenzie Valley Environmental Impact Review Board with its Technical Report for the Tłıchǫ All-Season Road (TASR) environmental assessment review.

Developing this technical report required us to think critically about a future-scenario with an all-season road to Whatì. To do so, we built off the research from our previous information request (IR) responses, information provided by the proponent and other parties, and the technical session outcomes and commitments, which took place in Behchokǫ in August 2017.

Based on our extensive review of the information provided to date, the Tłıchǫ Government's technical report effectively speaks to the determination of impacts that may occur as a result of the TASR, and our committed mitigation strategies. The Tłıchǫ Government, its departments and agencies stand behind the TASR as a community-driven project that will contribute to the growth, prosperity and longevity of Whatì, its residents and Tłıchǫ citizens.

The Tłıchǫ Government continues to invest a great deal of research, resources and personnel into understanding the potential benefits and impacts of the TASR for Tłıchǫ citizens and the community of Whatì. Tłıchǫ community members, elders and staff from the Tłıchǫ Government, TCSA, Community Government of Behchokǫ and Community Government of Whatì have been involved in every step of the EA review process.

The Tłıchǫ Government worked closely with the Government of the Northwest Territories-Infrastructure throughout the development of the technical report and over the course of the TASR EA review. We continue to approach this EA review with a high degree of diligence, cooperation and transparency in our research.



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We look forward to meeting with the Review Board and other parties at the November public hearings in Whatì.

Sincerely,

A handwritten signature in black ink, appearing to read "Jim Martin".

Jim Martin
Acting Tłıchǫ Executive Officer

c.c. Michael Conway, Regional Superintendent, Department of Transportation
Simon Toogood, Mackenzie Valley Environmental Impact Review Board
Zabey Nevitt, Tłıchǫ Government
Ginger Gibson MacDonald, The Firelight Group



Technical Report for the Tłıchq All-Season Road

October 11, 2017

EA 1617-01

Prepared by the Tłıchq Government

Submitted to the Mackenzie Valley Environmental Impact Review Board

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List of Tłıchq Names

Behchokq	Also known as Rae-Edzo
Gamèti	Also known as Rae Lakes
Gòlo Tì Deè	Marian River
Hozii ekwò	Barren-ground caribou
ǰhdaak'è Tì	Marian Lake
K'àgòòtǰıı	Old tractor trail
K'eàgoti	Hislop Lake
Mqwhì Gogha Dè Nǰıttèè	The traditional area of the Tłıchq described by Chief Monfwi during the signing of Treaty 11 in 1921
Nàǰǰı	The falls on Tsotideè
Tqdzı	Woodland caribou
Tsotideè	Lac La Martre
Wek'èezhıı	The management area of the Tłıchq Agreement
Wekweèti	Also known as Snare Lake
Whati	Also known as Lac La Martre
ʔebòts'ıti	Boyer Lake

Acronyms

ASR	Adequacy Statement Response
BA	Bathurst
BNE	Blue Nose East
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
DFO	Fisheries and Oceans Canada
EC	Environment Canada
GNWT	Government of the Northwest Territories
MARCS	Multi-Agency Rescue Coordination System
MCBCCA	Mobile Core Bathurst Caribou Conservation Area
MOU	Memorandum of Understanding
MVRMA	Mackenzie Valley Resource Management Act
PDR	Project Description Report
RCMP	Royal Canadian Mounted Police
Review Board	Mackenzie Valley Environmental Impact Review Board
RSA	Regional Study Area
TAEMP	Tłıchq Aquatic Ecosystems Monitoring Plan
TAH	Total Allowable Harvest
TASR	Tłıchq All-Season Road
TCSA	Tłıchq Community Services Agency
TK	Traditional Knowledge
WMMP	Wildlife Management and Mitigation Plan
WRRB	Wek'èezhì Renewable Resources Board

1.0 Executive Summary

The Tłıcho Government submits this Technical Report containing the assessment of impacts and mitigations from the construction and operation of the Tłıchq All-Season Road (TASR). The Tłıcho Government has participated in all aspects of the review of the TASR to date, and has collectively and individually identified a number of mitigations and made a number of commitments that will manage the predicted impacts of the proposed road.

Tłıchq Government has determined, through our detailed assessments, that the construction and operation of the TASR will not cause any significant adverse impacts to the lands, resources or way of life of the Tłıchq people. The mitigations and commitments developed during the review process will not only ensure any predicted adverse impacts are minimized but will create actual benefits for the residents of Whatı and all Tłıchq Citizens.

The assessments made in this document are the result of many years of engagement and consultation with Tłıchq community members, elders, staff from the Tłıchq Government, Tłıchq Community Services Agency, Community Government of Whatı, and Community Government of Behchokq. Interviews were also conducted with the Royal Canadian Mounted Police (RCMP), social service and education providers, as well as leaders in Tłıchq language learning. Throughout the environmental assessment review process, led by the Mackenzie Valley Review Board (Review Board), the Tłıchq Government has continued to engage and consult with all parties to identify issues and concerns and to develop commitments and mitigations to manage predicted impacts.

Since the Technical Sessions held in August, 2017, the Tłıcho Government has developed a range of new mitigations with Fisheries and Oceans Canada (DFO) and the Government of the Northwest Territories (GNWT); these are listed in Appendix E.

The Tłıchq Government submits this report to fulfil our responsibilities to Tłıchq Citizens, with the intent being to effectively examine and develop mitigations to any predicted impacts from the proposed project. We look forward to the next phase of this EA, the public hearings in Whatı.

A note on terminology – this Technical Report repeatedly uses the Tłıchq words for species, place names and the management areas. These are defined below:

- Tqdzı - woodland caribou
- Hozı ekwò - barren-ground caribou
- Tsotideè - Lac La Martre
- ʔebòts'itı - Boyer Lake
- Gòlo Tı Deè - Marian River

2.0 The Tłıchq Government and Tłıchq Agreement

The Tłıchq have used and occupied their traditional territory— Mqwhì Gogha Dè Nııłtèè —since time immemorial. They entered into a modern treaty with the Crown to recognize Tłıchq rights and title in their territory, and to find ways to share the land while preserving the Tłıchq people and Tłıchq way of life.

On August 25, 2003, the Agreement was signed by Canada, the Northwest Territories and the Tłıchq. Unique among the other land claims agreements in the Northwest Territories, the Agreement is both a land claim and also a constitutionally- protected self-government agreement, the first of its kind. The fundamental objective of the Agreement is to preserve the Tłıchq way of life and protect their traditional territory for generations to come.

Mqwhì Gogha Dè Nııłtèè is the overall traditional territory of the Tłıchq and the largest area in which the Tłıchq hold and exercise rights. The Agreement describes this as “the traditional area of the Tłıchq, described by Chief Monfwi during the signing of Treaty 11 in 1921. The Agreement guarantees the Tłıchq that they will continue to have rights in this area, including harvesting rights – the right to hunt, fish and trap – and rights to economic participation in the wealth generated from this area. Mqwhì Gogha Dè Nııłtèè is approximately 205,000 square kilometers.

Wek’èezhii is a smaller area within Mqwhì Gogha Dè Nııłtèè. The Agreement describes Wek’èezhii as “an area appropriate for the management of resources under the Agreement.” It is in the heart of Mqwhì Gogha Dè Nııłtèè and is an area of immense importance to Tłıchq. The health, traditional pursuits and well-being of the Tłıchq and Tłıchq lands are inextricably intertwined with Wek’èezhii. Tłıchq co-management in Wek’èezhii is fundamental to the Agreement because the health and future of the Tłıchq people and the Tłıchq lands are dependent on the health and future of Wek’èezhii. Wek’èezhii is approximately 160,000 square kilometers.

Tłıchq lands are contiguous area within Wek’èezhii in which Tłıchq Government, on behalf of the Tłıchq people, is vested with Tłıchq title. In this area, Tłıchq Government exercises principal jurisdiction, subject to defined limitations as set out in the Tłıchq Agreement. Tłıchq lands encompass approximately 39,000 square kilometers.

The Tłıcho Agreement describes, among other things, the rights of Tłıchq Citizens and the role and jurisdiction of the Tłıchq Government. Among other things, the Tłıchq Government has the power to pass laws, enforce its own laws, delegate its powers and authority, and establish the structure of Tłıchq Government and its internal management. The powers and authority of the Tłıchq Government includes the following, to name a few:

- Use, manage, administration and protection of Tłıchq lands and renewable and non-renewable resources;
- Land use plan for Tłıchq Lands;
- Managing and harvesting of fish and wildlife on Tłıchq lands;
- Create new offices, entities and institutions; and
- Management of rights and benefits provided under the Tłıchq Agreement.

The Tłıchq Agreement also defines the rights and responsibilities of other parties, including the federal and territorial governments within Mq̄whì Gogha Dè Nı̄ıttèè.

3.0 Valued Components

3.1 Fish and Fish Habitat

3.1.1 Tłıcho Government Predictions

There is a strong desire articulated in Tłıchq Regional Economic Development Plan to maximise eco-tourism opportunities in the region, as per the Tłıchq Land Use Plan and in the Tłıchq Regional Economic Development Plan. Further, the Tłıcho Government believes that the TASR will improve access to Tłıcho lands for Tłıcho citizens, supporting the practice of Tłıcho culture and way of life.

The Tłıcho Government has identified two issues related to fish and fish habitat along the TASR:

- The potential for TASR to allow for increased fishing activity along bridges and water crossings and more broadly within the Tłıcho region; and
- The potential for construction activities (through the use of culverts) to affect water flow and potentially influence fish habitat downstream of the culverts.

3.1.1.1 *Potential Increase in Fishing Activity*

With improved access into the region, which includes 17 kilometres of road that is currently located on Tłıcho lands and three kilometres of road on Whatì land, the proposed TASR stands to increase opportunity for fishing activity in the region by both Tłıcho and non-Tłıcho fishermen. This is especially true for Tsoıdeè (Lac La Martre) and for the one bridge that is within Tłıcho Lands, across Gòlo Tì Deè (Marian River).

The Tłıcho Government does anticipate an incremental increase in fish harvesting. This is especially true for Tłıcho fishermen who will have improved access to lakes and rivers on Tłıcho lands that were previously difficult to access. In [PR#97](#), the Tłıcho Government reviewed the highly valued fishing sources, such as Tsoıdeè and ʔebòts'iti (Boyer Lake), which are likely to attract the most interest from recreational fishing.

Although access to Tłıcho lands is expected to improve, the distance of Whatì or newly-accessible rivers from major population centres (i.e., the drive from Yellowknife to Whatì is over 150 kilometers) is such that the increase in fishermen to the area is expected to be low. This has been confirmed by the GNWT, who anticipate that the increases in fishing due to improved access to desirable fishing spots will be low.

Given the healthy fish stocks in Tsoıdeè, this lake is predicted to be a highly desirable fishing location for both Tłıcho and non-Tłıcho fishermen. In the technical sessions, the developer indicated that current harvesting levels in Tsoıdeè – which estimates suggest holds approximately 63,000 kg of lake trout – are well below its potential yield. The developer's estimation is an indicator of the lake's sustainability and ability to support an increase in fishing activity. Due to the overall healthy stock of lake trout, distance from

major population centers and the Tłıchq Government's authority over Tłıchq lands, the developer anticipates the effects of recreational anglers will be low.

The Tłıchq Government does not anticipate a noticeable decline in fish stocks or harvesting abilities for Tłıchq citizens as a result of the TASR. Furthermore, the Tłıchq Government anticipates that any adverse effects will be offset by the economic development and tourism opportunities associated with increased access to fishing ([PR#97](#), IR1). Fishing in Tsoıdeè, or other water bodies on Tłıchq lands, are subject to Tłıchq laws and regulations as determined by the Tłıchq Agreement and Tłıchq Land Use Plan.

“Given the health of our fish stocks, we do not expect to see a noticeable decline in fish stocks or harvest success for Tłıchq citizens, and any adverse effect will be balanced by economic development associated with tourism revenues” ([PR#97](#), IR 1, p11).

”Overall, the mixture of healthy fish stocks, low numbers of increased fishermen and access limitations will minimize the effect of the TASR on fish harvesting pressure to low levels” ([PR#97](#), IR 1, p10).

3.1.1.2 Use of Culverts

The TASR will cross 15 streams and waterbodies. The GNWT is planning to install four bridges at major water crossings and culverts in the remaining 11 crossings. The Tłıchq Government, and specifically Tłıchq elders, expressed concern in the traditional knowledge report ([PR#28](#)) and in the August 2017 technical sessions regarding culvert installations, and the potential for them to negatively impact fish habitat ([PR#159](#)).

Tłıchq elders expressed concerns about culverts as they feel bridges are safer for the health of streams, the health of fish, and fish habitat. In the August technical sessions, the developer suggested that culverts maintain the velocity in streams, thereby reducing potential for impact to fish and fish habitat. Although the GNWT was able to provide rationale for their decision to install culverts at 11 of the 15 water crossings, Tłıchq elders remained uncertain about the ability for culvert installation to avoid disruption to fish and fish habitat.

The developer has noted that of the smaller crossings, only crossing 10A has moderate or high quality large-bodied fish habitat, and according to conceptual designs will use an arch culvert. With respect to the larger water crossings (8, 9, 14 and 15), all of which are fish bearing rivers, four bridges will be constructed. Bridge crossing 15, located on Tsoıdeè, is the only bridge located directly on Tłıchq lands.

To meaningfully address the elder's concern, the GNWT committed to bringing a harvester along during the DFO water crossing review and meeting with the elders for a one-day site visit, in which they will view potential culvert locations along the TASR, create a space for mutual learning about culverts and learning from the elders as to how to best manage fisheries and stream crossings along the TASR. This site visit has been scheduled for October 11. The Tłıchq Government understands the developer will be posting a summary of this visit to the public registry later in October.

The Tłıcho Government fully expects to continue to collaborate actively with the GNWT to ensure that Tłıcho elders are actively involved in reviewing the culvert locations, verifying their sites, and ensuring that the challenges the elders have seen in the past are averted.

One bridge crossing (Crossing 15 at Gòlo Tı Deè) and Tsotideè are located directly on Tłıcho lands. This crossing can be monitored and managed effectively with existing instruments.

Furthermore, the Tłıchq Government has the legislative authority and jurisdiction to write laws, develop its own strategies, as well as control and effectively manage subsistence harvesting and industrial development on its lands (see the Tłıchq Agreement and Tłıchq Land Use Plan).

3.1.2 Developer Predictions

Tsotideè currently supports a relatively pristine fishery, where current population sizes of species in the lake should be linked to natural biological processes such as competition and predation, and the carrying capacity of habitat to support a species. (Developer Response to Wek'èezhì Renewable Resources Board (WRRB, Oct 3, 2017, [PR#211](#)).

Recognizing there is potential for the TASR to impact fish and fish habitat, the GNWT has outlined a series of mitigation measures in Table 3.2-1 of the ASR. The GNWT will apply the Sport Fishing Regulations (GNWT 2017a) throughout those parts of the TASR corridor that lie on Crown lands.

We assume most fishermen will arrive from Yellowknife to Tsotideè and ʔebòts'itì, and will be a day trip or a longer trip, depending on the start point. The developer has made a few other predictions:

- The developer considers the effects of increased access for recreational anglers to be very low; and
- The developer also considers that the use of culverts in the streams will ensure that velocity is stable, and that rivers will stay the same.

3.1.3 Mitigations

Recognizing there is potential for the TASR to impact fish and fish habitat, the GNWT and Tłıcho Government have outlined a series of mitigation measures and committed to working with each other in order to manage and control the potential increase in fishing activity resulting from the TASR. GNWT's proposed mitigation measures are in table 8-7 to the Project Description Report (PDR) ([PR# 7](#), Table 8-7). The Tłıcho Government's proposed mitigation measures are outlined in [PR# 97](#) IR 1.

The Tłıcho Government has the authority to manage fish harvesting, access and restrictions at the locations where there are bridge crossings on Tłıcho lands, and intends to exercise this authority.

The Tłıcho Government notes two monitoring programs that already exist that will be relied upon for monitoring, stewardship activities, and adaptive mitigation:

1. The Marian Watershed Stewardship Program, run by the Tłıcho Government, is a monitoring program covering the Goo Tı Deè river system from K'eàgotı (Hislop Lake) to Jhdaak'è Tı (Marian Lake), downstream from the TASR. The program is oriented in traditional knowledge collection, and is intended to increase capacity in the entire watershed as future development on Tłıcho lands occurs. This program marks a very important dedication to Stewardship - an overall watershed monitoring program with the intention of increasing capacity to engage community members throughout the entire watershed - as future development on Tłıcho lands occurs.
2. The Tłıcho Aquatic Ecosystem Monitoring Program (TAEMP) has led to a number of reports (WRRB 2011; WRRB 2012; WRRB 2013). The TAEMP is a community-driven fish monitoring program that documents changes to fish habitat, and is built upon both traditional knowledge and science. TAEMP is run annually in a different Tlıcho community every year with elders, youth, fishermen and scientists. The TAEMP is run and coordinated by the WRRB. The Tłıcho Government anticipates that the team for this program will continue the visiting program in Whatı, every fourth year. The Tłıcho Government anticipates this work will continue and welcomes the WRRB approach, and continued partnership in delivering this important community-based monitoring program.

In the technical sessions, commitments were agreed to in order to address outstanding concerns pertaining to fish and fish habitat:

Commitment 7: GNWT commits to review concerns regarding culverts, including a site visit with elders to view potential culvert locations, and commits to bring a harvester along with the DFO water crossing review, as feasible.

Commitment 14: The GNWT commits to take DFO on site tours of stream crossing before freeze-up to confirm the ephemeral nature of crossings.

3.1.3.1 New Mitigations (post Technical Session)

Since the technical sessions, additional commitments have been agreed to between the Tłıcho Government and GNWT. These have been developed based on a desire to ensure there are strong relationships, monitoring programs and adaptive management approaches in place.

Post Technical Session Commitment 1: The Tłıchq Government commits, subject to the availability of additional resources, to the design and implementation of a program that uses Tłıcho harvesters' traditional knowledge and methods to monitor, during construction and operation of the road the health of fisheries and the state of their habitat in rivers and lakes along the route of TASR.

Further details of the program, including any additional baseline information required, monitoring questions and approach, will be determined following discussion with traditional harvesters and elders. The expertise and advice of the WRRB, GNWT and other responsible government parties will be sought in the design of the program ([PR#211](#)).

The Tłıchq Government and Fisheries and Oceans Canada have proposed to develop a co-management partnership in order to manage fisheries outside of Tłıchq lands along the TASR route.

Post Technical Session Commitment 2: DFO and the Tłıchq Government commit to develop a strategy to monitor and manage impacts to fisheries from human fishing pressures created as a result of the operation of the Tłıchq All-season Road, including the joint-development of a creel survey for three years following construction, and on an ongoing basis as needed.

With the implementation and adherence to mitigation measures, monitoring activities and development of Tłıchq laws, the Tłıchq Government will be poised to respond to issues if they emerge through the monitoring programs that are existing or will be developed. The Tłıchq Government and DFO will respond with adaptive management to issues as they emerge.

3.2 Caribou

Tłıchq people distinguish between two types of caribou: ṯdzı (woodland caribou) and hozı ekw̱ (barren-ground caribou). Tłıchq elders describe ṯdzı as darker and larger than the hozı ekw̱, and as having different hoofs. The hoofs of the ṯdzı have a pointed shape, while hozı ekw̱ have a rounder shape. Both hozı ekw̱ and ṯdzı are critical animals to the culture and way of life of Tłıchq people (Tłıchq Government 2014; Tłıchq Government 2016).

As noted in numerous earlier documents, the TASR has the potential to impact both types of caribou, both directly and indirectly. With respect to hozı ekw̱, the Tłıchq Government recognizes the importance of considering TASR-related impacts to management of both the Bluenose East (BNE) and Bathurst (BA) herds. The Tłıchq Government has reviewed the developer's Adequacy Statement Response (ASR) ([PR#110](#)) and the responses to the information requests, and considers that the work completed in range planning, as well as the work to be completed in permitting of the project, will ensure that there are no significant residual impacts to caribou.

The Tłıchq Government notes a new commitment since the technical hearings between the parties to monitor and manage effects of the TASR on caribou.

Post Technical Session Commitment 3: The GNWT is committed to supporting, subject to availability of additional resources, the Tłıchq Government in the design and implementation of a program that uses Tłıchq harvesters' traditional knowledge and methods to monitor the health of ṯdzı (boreal caribou) and the state of their habitat, and the state of hozı ekw̱ (barren-ground caribou) winter habitat, during and after the completion of the TASR project. Further details of the program, including monitoring questions and approach, will be determined following discussion with traditional harvesters and elders through engagement

with the Tłıcho Government, with WRRB being engaged/consulted, and with a view to being included as a component of the Wildlife Management and Monitoring Plan (WMMP) to be finalized and approved during the regulatory phase for this project.

Pathways of effects to ṯdzı and hozı ekw̱ are outlined in Table 4 of the WMMP ([PR#192](#), p13). This table organizes all of the identified impact pathways from the proposed TASR into five pathway categories: direct habitat loss; indirect habitat loss or alteration; sensory disturbance; direct mortality; and access and harvesting. The table includes a summary of the applicable monitoring for each pathway category that is identified and assessed in the developer's ASR ([PR#110](#)).

The Tłıcho Government believes there will be a moderate adverse impact to both ṯdzı and hozı ekw̱ from the TASR. These impacts are lessened because the TASR traverses an existing corridor along much of the proposed route. For ṯdzı and hozı ekw̱, the Tłıcho Government suggests that the following potential effects of the TASR be considered and mitigated through adaptive management:

- Increased access and harvest;
- Direct loss of habitat;
- Increase in habitat fragmentation (i.e., indirect habitat loss or alteration);
- Sensory disturbance to caribou;
- Increased predation risk; and
- Collisions with vehicles

The WMMP addresses mitigations specific to these impacts under Sections 4.0 and 5.0. Since the technical sessions, Tłıcho Government has worked with the GNWT to identify additional commitments. The rationale for adding these commitments is three-fold:

- To fill identified gaps in knowledge that will help in making future decisions about range and sub-range level management of ṯdzı;
- To ensure a strong connection between the TK-based ṯdzı and hozı ekw̱ monitoring program, the science-based monitoring program, and management decisions for ṯdzı and hozı ekw̱; and
- To ensure relevant data are collected at an appropriate scale to inform additional mitigations specific to the TASR itself.

3.2.1 Tłıcho Government Predictions

3.2.1.1 Ṯdzı (*Boreal Caribou*)

The TASR route traverses a southern portion of boreal caribou range NT1 (as identified in Environment Canada's 2012 Recovery Strategy). Based on Tłıcho knowledge, ṯdzı move throughout the entire study area where the road is proposed, the elders locate their main habitat in the centre of the study area, and mainly west of K'agòòtılııı (the old tractor trail) (ASR Figure 4.1-2, [PR#110](#)). The areas south of ʔebòts'iti (Boyer Lake)

around the lake Ethletitso and the smaller lakes west of Tsigatii towards Whatı are identified as key tɔdzı habitat ([PR#28](#), p37).

The developer's ASR states that boreal caribou are predicted to be self-sustaining and ecologically effective with a low risk, but are nearing their resiliency limits (ASR p4-40). A framework for range planning is currently in development for the Bathurst Caribou Range Plan; range plans will likely be developed for up to six smaller regions nested within the NT1, including Wek'èezhıı (see NT1 range in Environment Canada, 2012; J. Hodson, pers comm., Sept. 29 2017).

The Tłıcho Government notes that much of the existing disturbance is in the southern portion of NT1, within the Wek'èezhıı portion of the NT1 range. The majority of disturbance in the Wek'èezhıı region is from fire (39.1%). Traditional knowledge (TK) suggests that forest fire disturbance to preferred tɔdzı habitat in the taiga plains has led to fewer boreal caribou in the area. The Tłıcho who harvest tɔdzı maintain that these caribou and their habitat are already limited due to forest fires and that there is potential for increased impacts with industrial development and associated infrastructure (Wek'èezhıı Renewable Resources Board, 2013).

The ASR states that cumulative effects of the Project and other developments should not have a significant influence on the ability of the boreal caribou to be self-sustaining in the NT1 range. Following a description of possible cumulative impact pathways, the report goes on to state that *“overall, the weight of evidence...predicts that incremental and cumulative changes to measurement indicators from the Project and other developments should have no significant adverse effect on self-sustaining and ecologically effective boreal caribou populations”* (ASR p4-213). The ASR includes an assessment of reasonably foreseeable developments. These reasonably foreseeable developments for boreal caribou include: the proposed Mackenzie Valley Highway and the Prairie Creek mine project. More generally, other developments are: the Fortune Minerals NICO mine, Nàııı Hydroelectric Project, La Martre River Falls, and the Tłıcho Whatı Park Area at La Martre Falls (ASR p2-3) (Tłıcho place names not added, due to this being a reference from the ASR).

Importance of range planning

The Tłıcho Government is aware of range planning that is set to consider further the effects of development on caribou, and expects that this range planning will meaningfully engage elders, harvesters and the Tłıcho Government. The Tłıcho Government expects that there will be the opportunity in these forums to discuss TK data collection that is needed, such as baseline monitoring in the range plan to establish an empirical basis for cultural / and subsistence use and reliance of Tłıcho people on tɔdzı (from historic and present perspectives). The Tłıcho Government supports the type of approach taken in the Bathurst Caribou Range Plan (Bathurst Caribou Range Plan, 2016).

The Tłıcho Government considers it vital to understand the role the TASR may play in the range plan. Linear corridor density in the area, the total amount of young forest on the landscape, and predator access to important refuge and calving areas have been reviewed and documented in more southerly boreal caribou ranges as the main factors contributing to the decline of boreal caribou in these areas (Environment Canada 2012 Recovery Strategy).

Given this situation, the Tłıchq Government considers both the effects of the road itself, as well as the facilitation of increases in linear corridor density, the total amount of young forest (40 years or younger) on the landscape, and the potential changes over time in predator / prey relationships, and the increase in hunter access, to be important impacts to boreal caribou that should be considered in the design of monitoring and mitigation strategies through the WMMP in the permitting phase.

The Tłıchq Government notes that some knowledge gaps were usefully identified in the technical sessions associated with ṯḏzı in the NT1, and more specifically in the Wek'èezhıı portion of the range. The Tłıchq Government recognizes that broader issues of caribou population trends and management actions are best through co-management approaches, such as through land use planning and the development of range and sub-range plans for ṯḏzı, and will address further information gaps to that forum.

The GNWT and the Tłıchq Government have committed to an existing approach in which co-management partners can understand how information that emerges from range planning can inform the WMMP. The Tłıchq Government appreciates the GNWT's commitment to support the monitoring of caribou health and habitat. Once the details of the monitoring program become finalized through upcoming discussions between traditional harvesters, elders, Tłıchq Government, WRRB and other co-management partners, the Tłıchq Government trusts the following information gaps will be addressed:

- Avoidance of the TASR right of way by caribou populations;
- Location of and changes to important habitat features including calving grounds and movement corridors; and
- Increased predator population and predator movement along the TASR, specifically from wolves.

Understanding current caribou use of the area will help in determining whether there are negative effects to caribou population connectivity as a result of the TASR, and will help inform whether further mitigation measures are needed. Understanding the interaction between the TASR and wolves to caribou populations is important to ensure that management actions address this interaction to the extent possible. The Tłıchq Government trusts that the permitting phase will allow us sufficient time to address these issues in a collaborative manner.

3.2.1.2 Hozıı Ekw̱ (Barren Ground Caribou)

Based on the 2014 TK Study Report, hozıı ekw̱ migrate through the TASR Study area on an annual migration route from the barren lands to their winter habitat in the forest. Hozıı ekw̱ enter the Study area during the winter months, between November and March. In recent years (since the late 1990s), few barren-ground caribou have been observed in the Study area (TK Study Map 6, p36).

Hozıı ekw̱ from both the BNE and BA herds may occur within the TASR study area in winter, but regular and frequent interaction with the project is not expected based on the developer's summary in the ASR (p4-47). Tłıchq hunters say that fewer barren-ground caribou migrate into the Study area, possibly due to changes in migration routes associated with development on the barren lands and on the wintering grounds ([PR#28](#)

p25), but the reduced occurrence may also be tied to contracted range use as a result of declining population size.

Both the BNE and BA herds have declined rapidly over the past decade with significant declines observed over recent years (Boulanger et al. 2016 b, c). In late 2016, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assessed barren-ground caribou as threatened; further protections for these herds may be imminent if they are listed under the Species at Risk Act. All parties have emphasized that hozıı ekwò could interact with the TASR in the future if the population of BNE and BA caribou herds increase to former levels.

The ASR states that the cumulative effects from the Project and other developments should not have a significant influence on the ability of the barren-ground caribou to be self-sustaining and ecologically effective in the regional study area (RSA). Overall, the weight of evidence from the analysis of the primary pathways predicts that incremental and cumulative changes to measurement indicators from the Project and other developments should have no significant adverse effect on self-sustaining and ecologically effective barren-ground caribou populations.

The Tłıchq Government continues to work with co-management partners to review if the development of the TASR could lead to conditions that will cause further decline of hozıı ekwò populations. Based on Tłıchq knowledge, the Tłıchq Government and elders have identified potential impact of the TASR on hozıı ekwò, in terms of future habitat suitability, increased risk of predation, and the potential impacts of increased hunting pressure (legal and illegal) due to improved access.

Specific to increased risk of predation, as with the tòdzı, the hozıı ekwò are potentially vulnerable in their winter ranges due to increased risk of predation. Increases in predator populations and their potential interactions with hozıı ekwò have been noted by Tłıchq hunters.

Specific to increases in hunting pressure, the TASR will increase access into the region, making it much easier and faster for harvesters to access hozıı ekwò. The Bathurst herd currently has total allowable harvest (TAH) of zero due to its current vulnerable state (WRRB 2016a). Since winter 2014/15, harvest of caribou has not been permitted within the Mobile Core Bathurst Caribou Conservation Area (MCBCCA), which is presently based on a 60-km buffer around collared Bathurst caribou (WRRB 2016a, Croft 2017). In comparison, the WRRB recommended a herd-wide TAH of 750 caribou for the BNE herd, of which 295 (bulls only) are allocated to Tłıchq (WRRB 2016b, Dragon 2017).

3.2.2 Mitigations

In the technical sessions, commitments were agreed to in order to address outstanding concerns pertaining to tòdzı and hozıı ekwò. Previous Information Request responses from GNWT, as well as information contained with the WMMP, address these commitments. The WMMP outlines mitigations specific to tòdzı and hozıı ekwò to address concerns arising through both the construction and operation phases of the TASR. Key Construction Phase mitigations for both types of caribou are outlined in Table 6 of the WMMP ([PR#192](#)). Proposed effects monitoring for tòdzı and hozıı ekwò are described in Section 5.2 of the Wildlife Effects Monitoring of the WMMP.

Specific to ṯdzı, the GNWT has initiated a collaring program for boreal caribou in the vicinity of the proposed TASR. This program will provide baseline data on boreal caribou distribution, population trend, movements and body condition in the TASR Project area, against which predicted impacts can be monitored. Collars are also necessary to complement aerial surveys to provide sightability metrics necessary for calculation of abundance should population surveys be undertaken by the GNWT in future. Information on habitat associations obtained from collars can be used to develop mitigations for preventing collisions with vehicles.

Based on the narrative description of what is occurring with collared boreal caribou in the vicinity of the proposed TASR (refer to maps prepared in response to Commitment 9 from the Technical Report, [PR#199](#)), the Tłıchq Government notes that additional efforts could be made to collar caribou near the road, particularly to see if the existing road is already influencing movements of boreal caribou.

Regarding thresholds, the WMMP currently commits to various actions in relation to identified thresholds. With respect to ṯdzı, the document suggests that during operations, information from the collaring program will “support regional scale efforts such as range planning and help to identify larger issues with productivity and survival that may lead to consideration of management interventions among co-management partners.”

With respect to hozı ekw̱, the identified threshold and management action is that barren ground caribou approaching within 10 km of the TASR road will result in a notification to discuss the need for potential management actions such as temporary signage or speed reductions.

Tłıchq Government suggests that further work in the regulatory phase could go into identifying how thresholds at the range level could translate into TASR level management actions. Each of the proposed monitoring programs that relate to the operation of the road (e.g., traffic monitoring, access and harvest monitoring, boreal caribou and barren-ground caribou collaring, moose and bison population monitoring, and the proposed predator monitoring program) should include identifying specific triggers that would enact a higher level of mitigations.

These triggers, however, can be rather arbitrary and based on consensus. The Tłıchq Government has developed post-Technical Session Commitment 4, which will allow discussion of the types, approaches and applications of triggers in a co-management context.

3.2.3 New Mitigations for Ṯdzı and Hozı Eḵw̱ (post Technical Session)

Post Technical Session Commitment 3: The GNWT is committed to supporting, subject to availability of additional resources, the Tłıchq Government in the design and implementation of a program that uses Tłıchq harvesters’ traditional knowledge and methods to monitor the health of ṯdzı (boreal caribou) and the state of their habitat, and the state of hozı ekw̱ (barren-ground caribou) winter habitat, during and after the completion of the TASR project. Further details of the program, including monitoring questions and approach, will be determined following discussion with traditional harvesters and elders through engagement with the Tłıchq Government, with WRRB being engaged/consulted, and with a

view to being included as a component of the WMMP to be finalized and approved during the regulatory phase for this project.

Post Technical Session Commitment 4: The Tłıcho Government runs strong and effective programs that collect traditional knowledge and answer citizens' questions. They are strong counterparts to the data collected by the GNWT. The WMMP Annual Reports and Comprehensive Reports will consider other studies that are conducted on an annual basis in the region, and will specifically review traditional knowledge of the harvesters and the elders from existing Tłıcho programs in order to inform adaptive management and revise or change mitigations as indicated by the research. The GNWT and Tłıcho Government commit to regular, face-to-face meetings to support the integration of traditional knowledge and western science monitoring perspectives throughout the process.

A number of specific points can be captured in this Technical Report, in order that permitting discussions are able to reflect on the following points. The Tłıcho Government does not wish to enter these as commitments, rather establish that these topics should form the basis for continuing dialogue on the WMMP.

- Tłıcho Government requests that the discussion of the TK-based and western science monitoring programs should include a broad discussion, in line with the development of the range plan, of the utility of investigating predator populations, moose and other prey species in the vicinity of the proposed TASR, and developing adaptive monitoring and planning as new knowledge emerges;
- Further studies to inform the WMMP could include a Tłıcho harvest monitoring study that could usefully review a TK-based baseline of wildlife harvesting in the TASR area, as well as a complementary empirical and TK-based harvest study that focuses on wildlife harvesting and access by Tłıcho and other people using the TASR;
- The final WMMP could include an estimate of the number of collars required in the vicinity of the road to answer questions specific to the road impact itself, in addition to population trends and demographics more broadly. Thresholds of acceptable change, based on both TK and western science, could be developed and integrated into a future version of the WMMP or into range management more broadly. These thresholds should be defined based on data coming from both the science-based program and the TK-based program; and
- The Tłıcho Government recommends that the thresholds be collectively discussed in the final version of the WMMP in the regulatory phase. The WMMP could include the agreement to add mitigations once information regarding the interactions between tǫdzi, hozıı ekwǫ and the TASR (including information from both collaring and TK-based monitoring) become available.

3.3 Wildlife and Species at Risk

The Tłıchq Government is not registering new commitments or predictions with respect to wildlife and species at risk. The Tłıchq Government notes the new commitment in the Technical Sessions (Commitment 12), regarding avian species at risk, which will be included in monitoring and mitigation, particularly near borrow sources and stockpile locations.

3.3.1 New Mitigations (post Technical Session)

There are no new mitigations to register for wildlife and species at risk.

3.4 Traditional Use, Culture and Heritage Resources

“I think that even though the road is build, I really think that the traditional activities of hunting and trapping should continue on. It shouldn't interfere because of construction of road, and access to Whatı. As well, I'm sure that there may be interest from our people to maybe build alongside the proposed road. I just want you to know that these kinds of things that you may be expecting. There may be people who want to build because of the access being built, so it just makes a lot easier for people to have buildings along the road” (elder Louis Flunkie, August 17, 2017).

3.4.1 Tłıchq Government Predictions

3.4.1.1 Language

Tłıchq language is currently in a state of crisis. Many factors have contributed to this loss of way of life, including disconnection from traditional practices, forced reduction in language use at residential schools, loss of community traditions such as collective hunting activities and many other factors. The Tłıchq Government has predicted that the TASR will become another stressor resulting in reduced knowledge and use of Tłıchq language. Tłıchq is the currently the primary language at home in Whatı. The road to Behchokq has contributed to a reduction in the strength of the language and caused English to be the primary language in many homes, therefore we expect the Tłıchq language will be weakened. In Table 1-2 of [PR#96](#) (p16), the Tłıchq Government predicted that there would a high likelihood of continued loss of the language.

The prediction of Tłıchq language instructors and staff is that there is a high likelihood of continued language loss in Whatı, due to many factors, including the construction and operation of the TASR. There is an existing program in the Tłıchq Government in schools (with a kindergarten to grade 12 language program in Whatı) and homes, and this requires a continued investment by the Tłıchq Government.

In the area of language maintenance, the academic literature illustrates that it is key to have language champions and leaders. Thus, for youth, having a radio show or video channel for expressing themselves and communicating in Tłıchq could assist. School doesn't run all year, but people talk and make videos of themselves and each other all the time. In the academic literature, having a motivated leader is really essential to

language maintenance. There is a K-12 language program in Whatı now, as well as a language teacher.

3.4.1.2 Culture and Heritage Resources

Cultural sites were identified by 16 elders and harvesters from Whatı and Behchokq during the research for the TK Study (Tłıchq Government, 2014). Research methods included two focus groups, 15 individual interviews and two verification workshops with the elders and harvesters. These key trails, sites and burial sites are near the TASR, and are identified in [PR#96](#) (IR 3).

The required mitigations for these cultural sites are identified as well in [PR#96](#) (IR 3), specifically in Table 3-1.

It should be noted that these sites were not ground-truthed (i.e., they were not physically verified with elders while traveling out on the land) and therefore the locations are approximate. Site information and approximate locations are described in the elder's stories and words, which are respected as true. The Tłıchq Government will provide a report on the locations of these components in 2017; we are currently awaiting freeze up to travel by skidoo with harvesters (as required in August Technical Sessions, Commitment 21).

3.4.1.3 Trail Crossing Locations

The route selected for the TASR is along an existing tractor trail that has been used by Tłıcho citizens for many years. There are a number of trails in the area that are relied on for travel and access, some of which are not marked. The Traditional Knowledge study (PR#28) reveals a number of trails used by Tłıcho harvesters, particularly snowmobile and boat trails. The Tłıcho Government and Tłıcho elders feel it is important to document all trails in the TASR region to minimize potential impact to the trail networks, and reduce impacts to Tłıcho citizens' ability to use the trail network (see discussion of Commitment 21 below referring to Tłıchq ground truthing).

3.4.1.4 Signage at Trail Crossings

Traveling safely on the land is vital for Tłıcho citizen's ability to use and enjoy the land. With the TASR, vehicle traffic will be introduced into the region year round. While this creates opportunities for better access to the land for Tłıcho citizens, land users who use the network of trails are placed at potentially higher risk for collisions with vehicles. The Tłıcho Government requests the developer to ensure proper signage is posted at all trail crossings, once they have been documented (see discussion of Commitment 20 below referring to emergency response planning).

3.4.1.5 Cabin Construction

The Tłıcho Government notes that the TASR will lead to easier access to the area, affording the potential for an increase in cabin construction. Elder Joe Champlain refers to this:

“I will speak for a short while. It's Joe Champlain, from Whatı. I agree with Francis Simpson about how we still maintain our hunting and trapping activities in our communities. And also the cabins that the people have today, I haven't seen all of the cabins but I know people use the cabins. I do trapping. I have a cabin out on the land. And so we still continue to hunt and trap. We still continue to do that work. I'm not sure what it will be on – in the future about the hunting and trapping activities, but I just wanted to let you know we still do hunting and trapping, and we have cabins out there” (August 17, 2017, Technical Sessions).

The Tłıcho Government believes there may be a moderate development of cabins by Tłıcho people on Tłıcho lands.

3.4.2 Developer Predictions

The GNWT has predicted there will be traditional use impacts, as per Table 5.3-1 of the ASR:

- Direct disturbance to traditional use areas, including culturally significant areas;
- Increased mobility and time spent away from the community may result in changes to traditional way of life and culture; and
- Effects to wildlife and fish resulting in changes in the availability of traditional resources for harvesting.

For harvesting, the GNWT has predicted, as per Table 5.3-1 of the ASR:

- Direct disturbance to preferred traditional use areas including culturally significant areas.

For cultural areas, the GNWT has predicted, as per Table 5.3-1 of the ASR:

- Construction activities and operational maintenance and use of the Project could result in disturbances to culturally significant areas.

3.4.3 Mitigations

The developer has listed their mitigation measures in Table 5.3-1 of the ASR with respect to Traditional Use, Culture and Heritage Resources.

3.4.3.1 Language

There will be the continued development and application of schools programs in the Tłıcho language. Language survival is intimately linked to maintaining traditional practices – people on the land living and learning Tłıchq way of life. Tłıchq Government and communities have, and continue, to invest significant resources into programming that brings people to the land with elders, learning culture and learning language and way of life. These types of programs will help mitigate the general, and project specific, ongoing impacts to language use.

3.4.3.2 Trail Crossing Locations and Signage at Trail Crossings

Commitment 20 (access points) and 21 (to ground truth the sites) – made during the Technical Sessions – satisfied the Tłıchq Government’s need to ensure there is a strong plan with adequate information in place for access.

Commitment 20: The GNWT intends to consult with the Tłıchq Government and Project Co. from a highway safety perspective to ensure that there is a cohesive plan for access points or rest stops on the highway including appropriate signage where necessary. (Note: Project Co will be a qualified entity that the GNWT seeks to enter into a contract with to design, build, finance, operate, and maintain the Tłıchq All-Season Road Project).

Commitment 21: The Tłıchq Government will be ground-truthing the traditional trails and trapping routes from the traditional knowledge study and will be providing that information to the GNWT.

The Tłıchq Government, through the Department of Culture and Lands Protection (DCLP), will complete ground-truthing between November and December of 2017, pending freeze-up. The Tłıchq Government will submit a memo to the GNWT in this regard.

3.4.3.3 Cabin Construction

With respect to cabins on Tłıchq lands, the Tłıchq Government has authority and jurisdiction to manage cabins and access to Tłıchq lands. Tłıchq citizens have the right, as per the Tłıchq Agreement, to build a cabin anywhere on Tłıchq lands. The Tłıchq Government has an internal process in place to manage this.

Cabin construction and leases outside of Tłıchq lands is under the jurisdiction of the GNWT, which has developed the draft *Recreational Land Management Framework* (GNWT 2017b) and the *Land Use and Sustainability Framework* (GNWT 2014) to address recreational uses of public land.

Specifically, the *Recreational Land Management Framework* states:

“The GNWT recognizes that advancing many of the priorities identified within this Framework will require additional consultation and collaboration with Aboriginal governments and organizations that have asserted or established Aboriginal and/or treaty rights within the NWT. This consultation occurs in advance of initiating actions under the RLMF that may potentially affect Aboriginal rights. As an example, the GNWT will continue to consult with potentially affected Aboriginal governments and organizations prior to issuing a lease on Territorial or Commissioner’s Land” (GNWT 2017b, p4).

There should therefore be no impacts to Tłıchq use because of the active collaboration of the Tłıchq Government with the GNWT in decision making on new cabins.

3.4.3.4 *New Mitigations (post Technical Session)*

There are no new mitigations proposed following the technical sessions.

3.5 Economic Well-Being

For economic well-being, the GNWT identified employment, training, business development and GDP and government revenues as the indicators. All of the pathways are identified as generating a positive effect – from employment and income, to training opportunities, to year round tourism and local business, as well as increased funds from revenues from taxation – the pathways for economic growth are all generally predicted to be positive. Table 5.3-1 of the ASR identified all the mitigations.

3.5.1 Tłıcho Government Predictions

Generally, the Tłıcho Government expects positive impacts by way of economic development opportunities, such as increased employment opportunities, increased local business opportunities, greater mobility for education for the labour force (and therefore greater business opportunities), among others.

There is ongoing engagement between Tłıcho Government and the GNWT around the procurement for the construction and maintenance, Tłıcho Investment Corporation works carefully to maximize economic benefits around the construction and operation of TASR.

“And then the economic spinoff within a community, that's another area of concerns that I have. And I hope that the road will bring same --some prosperity as employment wise” (elder Francis Simpson, August 17, 2017, Technical Sessions).

In order to ensure that there are strong economic outcomes, there need to be programs committed to and established throughout construction and operation of the Project, such as the:

- Heavy Equipment Operator training which is ongoing in the community; and
- Yearly, Tłıcho monitors participate in Building Environmental Aboriginal Human Resources (BEAHR) environmental monitoring training.

The Tłıcho Government recently approved a five-year Economic Development action plan for each Tłıcho community, which will prepare the local workforce for TASR and an all-season road scenario.

3.5.2 Developer Predictions

The developer has generally predicted that there will be positive impacts in employment and economy.

3.5.3 Mitigations

As discussed in previous Information Requests and Technical Sessions, the Community Government of Whatì is already taking steps to ensure community safety (i.e., women in the workplace). The GNWT committed to review their own work safe policies:

Commitment 16: GNWT commits to review construction and operation work safe policies for the TASR with a gender lens to strive for safety of women ([PR#162](#) p98).

The Tłıchq Government is working with the GNWT to ensure maximum benefits, during the construction and operation of the Tłıchq All-Season Road. The Tłıcho Government and GNWT are developing requirements, in both the Request for Proposal and final Project Agreement, for specific levels of Tłıchq employment, training and contracting opportunities.

3.5.3.1 New Mitigations (post Technical Session)

There are no new mitigations proposed following the technical sessions.

3.6 Stable and Healthy Communities

3.6.1 Tłıcho Government Predictions

The Tłıcho Government identified a range of issues related to stable and healthy communities:

- Risks of exacerbating already existing negative social behaviours (mainly STIs, substance abuse and family violence); and
- Potential to improve quality of life for residents in Whatì.

3.6.1.1 Exacerbating Existing Issues

There are a number of social issues that the community of Whatì is presently managing. Issues related to substance abuse, family violence, increasing rates of STIs, school absenteeism, etc. have been prevalent in the community for years. The use of alcohol and drugs tends to increase with the opening of the seasonal winter road. Residents of Whatì have expressed concern that the TASR – a permanent all-season access road – may lead to an exacerbation of existing issues, as described by this elder.

“Yes. The -- talking about spike, I guess, you know, like the situation here is that, you know, that the -- the activities within our community is not -- it's not an active -- activity every day of the week but there -- the only time that -- you know, that the spike has to, you know, come into effect is probably when the winter road comes to connect within a community” (elder Francis Simpson, August 17, 2017).

The Tłıcho Government has addressed a number of existing issues and potential impacts from the proposed TASR in its written responses provided in [PR#96](#) and [PR#128](#). Many of these issues and concerns were addressed in the August 2017

technical sessions, where service providers in Whatì spoke to the possibility of the TASR exacerbating existing issues.

A notable concern with respect to an all-season road is the potential for drugs and alcohol supply to increase. This concern stems from the present winter road scenario, where RCMP report higher than average incidents of drug and alcohol-related charges, as well as an increase in violence and absentee parenting.

Once the TASR is operational, it is anticipated that there will be a short-term spike in substance use, and possibly increased pressures on RCMP. However, key service providers in the community also predict that this spike in negative behaviors will level out over time as the novelty of the road wears off. This prediction comes from highly knowledgeable and informed community service providers, who work and live in the community.

During the technical sessions, the Tłıchq Government and Tłıchq Community Services Agency (TCSA) emphasized that the issues addressed above already exist in the community; they will not be introduced into Whatì with an all-season road. The TCSA, Tłıchq Government and RCMP are collaboratively working on community education and programming to reduce these incidents and proactively prepare community members for a potential all-season road scenario.

3.6.1.2 Improving Quality of Life

The Tłıchq Government recognizes that the TASR offers an opportunity to significantly improve the quality of life for residents of Whatì. Community members have identified many challenges that arise from limited seasonal road connectivity, such as lack of access to goods and services, high costs of living, limited employment opportunities, etc. Having an all-season road would allow residents of Whatì to access a wider variety of services, reduce the overall cost of living, and reduce pressures on policing over the long term. The TASR stands as an opportunity to manage and address many of the negative social issues that already exist in Whatì.

Currently, the time families have available for winter resupply is getting shorter. The lessening winter road season adds stress and places additional pressure onto families, which is linked to the out-migration of community members and declines in school attendance. Furthermore, the high cost of living in Whatì increases with shorter time for resupply.

The winter road season is also a period of time when pressures on the RCMP are highest, as they are responding to the seasonal influx of substance use, increased rates of violence and increased incidents of absentee parents. This same trend may continue with the TASR. An all-season road also reduces the high cost of travel to and from the community via charter plane.

The Tłıchq Government feels strongly that an all-season road to Whatì will connect families and residents to a wider variety of services that are presently difficult to access. This includes medical services, recreational activities, economic opportunities, and other social services.

3.6.2 Developer Predictions

The developer identified a series of pathways pertaining to stable and healthy communities in Table 5.3-1 of the ASR ([PR#110](#)). The developer has predicted that:

- The potential for out-migration is a positive impact pathway;
- In-migration may increase in conjunction with positive economic growth;
- There are current limitations cited to building more housing units, which is why a housing working group has been established to manage growth;
- The present waste utilities (i.e. sewage and water treatment) would be able to accommodate an increase in population;
- Isolation, particularly for elders, would be alleviated with the opening of an all-season road;
- Social pressures may be exacerbated by improving access to drugs and alcohol, which may add to pressures on policing;
- The demand for emergency services is likely to increase with an all-season road;
- Project operations may increase the risk for traffic accidents for people travelling to and from Whatı;
- Food security and the cost of living could improve with project operations; and
- The vulnerability of youth, women, elders and others sensitive to economic pressures has potential to increase with project operations.

3.6.3 Mitigations

The Tłıcho Government continues to work closely with the TCSA, RCMP and Community Government of Whatı, all of whom maintain their finger on the best pulse on the community. Both of the Community Governments monitor the GNWT and RCMP statistics monthly. The TCSA and the Tłıcho Government remain focused on combatting addictive substance demand and putting preventative programs in place.

For instance, the TCSA noted in the technical sessions that they have hired an additional school counsellor to work with youth in the Whatı school. The TCSA also implemented public health programming, and has committed to continue with ongoing education for the residents of Whatı. Furthermore, the TCSA, RCMP and Community Government of Whatı have recently signed an MOU to implement additional family educational program that targets addictions, family violence and parenting.

The Tłıcho Government and TCSA will continue to apply adaptive management to all of their programming to ensure that programs are meeting the needs of community members. Appendix B lists the suite of programs led by the Tłıcho Government and TCSA. These programs are in place to proactively prepare the community of Whatı and Tłıcho citizens for the impacts and benefits of the TASR.

The Tłıchq Government stated it would be monitoring the lift of the prohibition in Behchokq̄ to better understand its impact on the rise or decline of alcohol-related incidents. According to the most recent RCMP report, there has been no spike or increased number of calls or incidents in alcohol-related incidents reported to the police since the ban's lift.

The commitments made in the technical hearings are strong, and if effectively applied, should yield stronger preventative approaches.

Commitment 15: The GNWT will provide the Review Board with the 'Mind and Spirit' framework that was released in November 2016, which sets the foundation for the GNWT's improvements to mental health and addictions programs and services.

Commitment 16: GNWT commits to review construction and operation work safe policies for the TASR with a gender lens to strive for safety of women.

Commitment 17: GNWT commits to update the Multi-Agency Rescue Coordination System (MARCS) in collaboration with the Community Government of Whatı and the Community Government of Behchokq̄.

Commitment 18: The parties commit that the 2017/2018 operational assessment will include analysis for the TASR and will jointly coordinate a Community Government of Whatı and Community Government of Behchokq̄ and GNWT session, yielding an examination of the current operating environment for the purpose of determining an acceptable standard of service and the necessary resources to maintain the desired service level.

Commitment 19: The GNWT will consider having a camera on the TASR for the purpose of monitoring road conditions to assist in maintenance activities and to allow the public to see real-time road conditions prior to travelling, which can enhance traveler safety.

The Tłıchq Government, GNWT and TCSA are committed to ensuring that the community and residents of Whatı are prepared to adapt to a future all-season road scenario. There are many programs, policies and services that support healthy living and well-being in the communities, as summarized in Appendix B below.

The residual impacts have been addressed by the Tłıchq Government in [PR#96](#), IR 1 (Table 1-2). Given the list of mitigations, commitments, programs and ongoing collaboration between governments and agencies, The Tłıchq Government expects to be able to identify trends as they occur and react to them accordingly.

3.6.3.1 New Mitigations (post Technical Session)

There are no new mitigations proposed following the technical sessions.

4.0 Conclusion

The Tłıcho Government has identified many of its own mitigations to apply to this project, including the original 13 identified early on. Since then, new mitigations have been identified and the Tłıcho Government has entered into new commitments.

Appendix C identifies the mitigations agreed to by the Tłıchq Government and Community Government of Whatı prior to the Technical Session. The new commitments agreed to during the Technical Session are listed in Appendix D. Commitments that have been agreed to following the Technical Session, by the parties, are listed in Appendix E.

The Tłıcho Government recognizes the potential for impacts, however through careful consultations with our communities, and planning and collaboration with all parties and the developer, we are convinced that the impacts from this road can be managed. As a result of this work, the Tłıcho Government is confident there will be no significant adverse impacts as a result of the TASR.

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Appendix B: List of Programs

Department/Agency	Program	Targeted Issues
Lands	Marian Watershed Monitoring Program	-A community-based Aquatic Effects Monitoring Program (AEMP) with specific consideration of the future impacts of the licensed NICO Project and other possible, future developments in the region
	Boots on the Ground Caribou Monitoring Program	-Caribou monitoring program -based on traditional ways of walking and watching the caribou -based on traditional knowledge indicators of a healthy environment by assessing caribou and habitat conditions, impacts from predators, climate change and industrial activities
	Land Use Plan	-Tourism -land access, management and monitoring
Community Services	HEO Training	-Skills training and capacity building
	Tłıchq Regional Economic Development Strategy	-Cross-sector employment, training and business opportunities for Tłıchq citizens -Economic development opportunities
	Our Nation Education (ONE) Financial Support Program	-Financial support for Tłıchq citizens in post-secondary programs
	Daycare	-Child care services for families in Whatı
	Tłıchq Arts and Crafts Strategy	-Economic development through sale of arts and crafts
	K-12 Language program	-Tłıchq language program offered in Whatı school

Community Programs	Community Action Research Team (CART)	-Community based research programs that provide TCSA with evidence and priorities for action
	Community Justice	-Reduce rates of crime, victimization and incarceration for Tłıchq citizens
	Victim Services	-Provide support to crime victims by means of assistance, information, referrals and other support services.
TCSA	MOU between TCSA and RCMP	-Addictions and recovery -Parenting courses -Sexual health
	Nishi Program	-Treatment program rooted in Indigenous knowledge
	Communicable diseases statistics	-The GNWT is responsible for collecting statistics on sexual health, which is shared with the TCSA on a quarterly basis
CEC	Inter-agency working group	-Inter-Agency responds to issues related to community preparedness, emergency response, social programs, and the community & lands concerns -Includes various departments from the Tłıchq Government, TCSA, RCMP and others.
	Resource Management Working Group	-The Resource Management Working Group was established by the Tłıchq Government to facilitate engagement efforts and relationships between industry and the Tłıchq Government. This Group is comprised of Tłıchq Government staff, who report directly to Tłıchq leadership.

Appendix C: Tłıchq Government and Whatı Community Government Commitments

Community Safety

Our goal is to strengthen community security and safety through resilient policing, policies and programs.

1. The Community Government of Whatı is investigating two options to strengthen community security: Community Bylaw Officer and the Aboriginal Policing Program. This is an issue that needs to be addressed jointly by the Tłıchq Government and the Community Government of Whatı, as well as other supportive agencies.
2. There is a need to provide on-the-land treatment for substance abusers, using the healing-power of the elders and the land. This is a social issue that needs to be addressed collectively, and one recommendation is to introduce the Nishi Program by accessing a variety of funding sources. In most cases, social issues are “community issues” that at the very least require community input into the solution. TCSA should be viewed for a tool or an organization that has resources to help communities.
3. There is currently an alcohol prohibition in place in Whatı. Annually, TCSA, the RCMP and the GNWT allocates a large sum to prohibition enforcement and responding to the negative impacts which are most often ineffective. The Community Government of Whatı would like to review the possibility of revisiting the prohibition ban, in favour of more proactive resilience strategies for managing alcohol and drug consumption in the community.

Economic Development

Our goal is to strengthen community economic development through programs and resources.

4. The need has been shown for increased business acumen for local entrepreneurs, in order to maximize local procurement opportunities from the road and mine. The Tłıchq Government currently maintains Economic Development Officers (EDO) in the communities who assist Tłıchq residents in establishing their own businesses. It may create a larger benefit for the Tłıchq Government to redirect each local EDO to focus on local economic development issues.

Community Preparedness

Our goal is to prepare the community of Whatı for road development through programs, intergovernmental coordination and provision of resources.

5. The Community Government of Whatı has an active Community Emergency Management Plan and completes regular training and exercises of staff, Council, and various community members. In 2014, the relevance of this training and preparedness was graphically demonstrated as wildland fires came within 5 km of the community.

6. The Community Government of Whatı is an active supporter of a local Inter-Agency Committee which includes the RCMP, Health, various TCSA agencies, and the Tłıchq Government. Whatı Inter-Agency responds to issues related to community preparedness. Issues such as emergency response, social programs, and the community & lands concerns are all brought to this monthly forum. Reasonable discussions about costs, liabilities and insurance will need to be addressed at this forum. Both parties commit to continuing this community forum in order to coordinate among agencies.
7. The Community Government of Whatı commits to clear and ongoing communication with citizens in the region, using appropriate means. These may include posters, door-to-door mail-outs, newsletters, as well as public meetings.
8. Housing stock and condition is an ongoing barrier to community well-being and preparedness. There is insufficient information on housing and the barriers, but key issues to investigate include income support, home ownership, property management, and local organization, as well as financing. A Local Housing Organization (LHO) is being established in Whatı, and the Tłıchq Government has signed a MOU with the GNWT on Housing, forming the Working Group – Housing.
9. There is a need for locally agreed-upon goals and plans for Community Well-Being. The Whatı Inter-Agency Committee should develop a small set of community based goals of resilience. As an example: A number of local gardens, and the support of a community garden, could be an example, with goals set for 2020 and 2025. The Community Government of Whatı commits to forming a small set of community goals during the 2015 Strategic Planning process (March 6 & 7), and then monitoring progress towards goals over-time.

Governance

Our goal is to prepare the citizens and governments for road development through development of predictable regulations, policies and support of services.

10. To ensure effective management, the Tłıchq Government will investigate the need for regulations and policies to manage the construction of cabins and design of hunting, trapping, and fishing in the area, in order to minimize impacts on local animal populations. The Tłıchq Government and the GNWT commit to work together to provide clear guidance on this topic.
11. The Tłıchq Government will develop mineral policy for Tłıchq Lands, so that there is clear and predictable regulation in the region.

TCSA

Our goal is to provide the communities with greater awareness and education tools on health related issues affecting our communities.

12. The Tłıchq Community Services Agency commits to providing more information for local health nurses on a range of health issues, such as sexually transmitted infections, among other issues.

Municipal Collaboration

Our goal is to promote ongoing collaboration between municipal governments through in order to best deal with changes, challenges and impacts in our communities.

13. There will be annual coordination between the Councils of Whatı and Behchokò to ensure that any changes and impacts are being collectively considered, addressed and managed.

Appendix D: Commitments Agreed to in the August 2017 Technical Session

Commitment 1 – WMMP development and party engagement

GNWT to meet with any interested parties to discuss any additional documents or outcomes of responses to IRs and WMMP, if requested.

Commitment 2 – WMMP and review by parties

If there are outstanding issues to consider, GNWT will consider a public review of the WMMP after the EA process is complete.

Commitment 3 – Caribou distribution data

GNWT commits to describe the likelihood of caribou distribution relative to the RSA by specifically including all available data on the distribution of barren-ground caribou on the western winter ranges including locations of harvesting and locations of caribou recorded during winter aerial surveys since 1996.

Commitment 4 – Cumulative Effects (CE) and data collaboration

GNWT commits to sharing its cumulative effects monitoring and adaptive mitigation protocols for TASR with Fortune Minerals, and collaborate with Fortune for opportunities to share boreal and barren ground caribou monitoring and mitigation.

Commitment 5 – Traffic monitoring and data sharing

GNWT to commit as part of traffic monitoring to look at average annual daily traffic and variations of traffic over time and provide the data in a timely way with the WEMP reporting.

Commitment 6A) – Traffic

GNWT commits to a literature search for effects of a range of potential seasonal traffic rates; including a maximum of 200 vehicles per day for moose, caribou and bison. The GNWT will incorporate the result of the literature search into the draft WMMP, which will be provided by September 22, 2017.

Commitment 6B) – Traffic

GNWT commits to research and produce biologically relevant traffic exceedance values (related to information gathered in the literature search in commitment 6A) to trigger adaptive management in the WEMP. These may be seasonally-specific and/or species specific.

Commitment 7 – Culverts and elder visit

GNWT commits to review concerns regarding culverts, including a site visit with elders to view potential culvert locations, and commits to bring a harvester along with the DFO water crossing review, as feasible

Commitment 8 – License sharing agreement

The GNWT commits to enter into licensing agreements with the Tłıchq Government on boreal caribou collaring data, as soon as it becomes available.

Commitment 9A – Additional boreal caribou maps and narrative for figures

The GNWT commits to providing boreal caribou collar maps for the summer, breeding, fall and winter periods as the information becomes available, as stated in the GNWT's response to ECCIR#7 (PR#128).

Commitment 9B – Additional boreal caribou maps and narrative for figures

The GNWT commits to providing a narrative to accompany the figures provided in the GNWT's response to ECC IR#7 (PR#128). This narrative will include an explanation of boreal caribou movements around Highway 3 and will be provided prior to the final technical report submission date.

Commitment 10 – Include updated and old protocols in the WMMP

The GNWT commits to providing the protocol outlining how boreal caribou collaring data was used for the TASR geotechnical investigations. The GNWT will provide new protocols for how boreal caribou collar data will be used during construction and operation of the TASR in the updated WMMP.

Commitment 11 – WRRB TK info on caribou

The WRRB will be unable to provide the final report on Tłıchq knowledge of t̄dzı, boreal caribou, and wildfire which will contain information about key habitat types within their range. However, the WRRB may be able to identify if any of those special habitats for boreal caribou are in the vicinity of the proposed road route and provide this information to the Review Board by October 4, 2017.

Commitment 12 – Avian Species at Risk Monitoring and Mitigation to be included in the WMMP

The GNWT commits to including monitoring and mitigation of avian species at risk at pit run borrow sources and stockpile locations in the next version of the WMMP which will be provided prior to the final technical report submission date.

Commitment 14 – DFO to participate in site visits of crossings

The GNWT commits to take DFO on site tours of stream crossing before freeze-up to confirm the ephemeral nature of crossings. Day 3 August 17, 2017

Commitment 15 – Wellness programming

The GNWT will provide the Review Board with the 'Mind and Spirit' framework that was released in November 2016, which sets the foundation for the GNWT's improvements to mental health and addictions programs and services.

Commitment 16 – Women's safety in the workplace

GNWT commits to review construction and operation work safe policies for the TASR with a gender lens to strive for safety of women

Commitment 17 – Highway rescue coordination

GNWT commits to update the Multi-Agency Rescue Coordination System (MARCS) in collaboration with the community government of Whati and the community government of Behchok̄.

Commitment 18 – Emergency response plan

The parties commit that the 2017/2018 operational assessment will include analysis for the TASR and will jointly coordinate a community government of Whatı and community government of Behchokò and GNWT session, yielding an examination of the current operating environment for the purpose of determining an acceptable standard of service and the necessary resources to maintain the desired service level.

Commitment 19 – Camera on the road

The GNWT will consider having a camera on the TASR for the purpose of monitoring road conditions to assist in maintenance activities and to allow the public to see real-time road conditions prior to travelling, which can enhance traveler safety.

Commitment 20 – Access points discussion

The GNWT intends to consult with the Tłıchq Government and Project Co. from a highway safety perspective to ensure that there is a cohesive plan for access points or rest stops on the highway including appropriate signage where necessary.

Commitment 21 – Ground truthing trails and trapping routes

The Tłıchq Government will be ground truthing the traditional trails and trapping routes from the traditional knowledge study and will be providing that information to the GNWT.

Commitment 22 – Summer archaeological impact assessment findings

The GNWT will provide the Review Board with an overview of findings from the summer archaeological impact assessment conducted as part of land use permit W2016S0009.

Commitment 23 – Acid rock drainage and metal leaching

The GNWT commits to avoid using borrow sources that have been characterized as having high or moderate acid rock drainage or metal leaching potential.

Commitment 24 – Water quality information to be provided with water

The GNWT commits to providing the following with the water licence application and for approval:

- Draft Sediment and Erosion Control Plan
- Measures for potential thermal erosion events
- Relevant lessons learned from other northern road projects (e.g. Inuvik to Tuktoyaktuk Highway) with respect to sediment and erosion control
- An updated In-Field Water Analysis Plan with further details on monitoring frequency and duration

Commitment 25 – WMMP and workshop

The GNWT commits to providing an updated WMMP to parties by September 22, 2017, and agrees to organize a half-day session with all interested parties to facilitate an overview of the revised WMMP

Appendix E: Commitments Agreed to After the November 2017 Technical Session

Post Technical Session Commitment 1: The Tłıchq Government commits, subject to the availability of additional resources, to the design and implementation of a program that uses Tłıcho harvesters' traditional knowledge and methods to monitor, during construction and operation of the road the health of fisheries and the state of their habitat in rivers and lakes along the route of TASR.

Post Technical Session Commitment 2: DFO and the Tłıcho Government commit to develop a strategy to monitor and manage impacts to fisheries from human fishing pressures created as a result of the operation of the Tłıcho All-season Road, including the joint-development of a creel survey for three years following construction, and on an ongoing basis as needed.

Post Technical Session Commitment 3: The GNWT is committed to supporting, subject to availability of additional resources, the Tłıchq Government in the design and implementation of a program that uses Tłıchq harvesters' traditional knowledge and methods to monitor the health of t̄odzı (boreal caribou) and the state of their habitat, and the state of hozıı ekw̄ (barren-ground caribou) winter habitat, during and after the completion of the TASR project. Further details of the program, including monitoring questions and approach, will be determined following discussion with traditional harvesters and elders through engagement with the Tłıcho Government, with WRRB being engaged/consulted, and with a view to being included as a component of the Wildlife Management and Monitoring Plan (WMMP) to be finalized and approved during the regulatory phase for this project.

Post Technical Session Commitment 4: The Tłıcho Government runs strong and effective programs that collect traditional knowledge and answer citizens' questions. They are strong counterparts to the data collected by the GNWT. The WMMP Annual Reports and Comprehensive Reports will consider other studies that are conducted on an annual basis in the region, and will specifically review traditional knowledge of the harvesters and the elders from existing Tłıcho programs in order to inform adaptive management and revise or change mitigations as indicated by the research. The GNWT and Tłıcho Government commit to regular, face-to-face meetings to support the integration of traditional knowledge and western science monitoring perspectives throughout the process.