

**DATE** September 28, 2017

**PROJECT No.** 1665943

**LOCATION** Tree of Peace Friendship Centre

**TIME** 1:00 pm to 2:30 pm

**PRESENT Federal Agencies and Governments:**

Flagler, Maureen, Indigenous and Northern Affairs Canada (on phone)  
Nichol, Emily, Environment Canada and Climate Change (on phone)  
Paradis, Adrian, Canadian Northern Economic Development Agency  
Summerfield, Bradley, Environment Canada and Climate Change (on phone)

**Golder Associates Ltd.:**

Grabke, Michele  
Panayi, Damian

**Government of the Northwest Territories:**

Boyd, Catherine, INF  
Brown, Rohan, DOJ  
Campbell, Darren, Lands  
Conway, Michael, INF  
Cronk, Mark, INF  
Hodson, James, ENR  
Mountain, Lara, INF  
Mulders, Tamika, Lands  
Niven, Stu, INF  
Patenaude, Andrea, ENR  
Rozestraten, Katie, INF  
Seale, Lorraine, Lands  
Witherly, Kate, ENR

**Mackenzie Valley Environmental Impact Review Board:**

Cliffe-Phillips, Mark  
Ehrlich, Alan  
Fairbairn, Catherine  
Toogood, Simon

**Tłı̨chǫ Government:**

Gibson, Ginger, Firelight (on phone)  
Leech, Susan, Firelight (on phone)

**WRRB:** Sent regrets. Follow-up meeting scheduled for Oct 3.

**NSMA:** Absent. Invited to follow-up meeting.

**YKDFN:** Absent. Invited to follow-up meeting.

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## Meeting Report from the Overview Session for the updated Tłıchǰ All-Season Road (TASR) Wildlife Management and Monitoring Plan (WMMP)

Presentation (Presenter)	Notes	Response/Action
<b>Introductions</b> (GNWT, Michael Conway) Start 1:15pm End 1:18pm	<ul style="list-style-type: none"> <li>Intent of meeting is to walk through various aspects of the WMMP and encourage a discussion so everyone is comfortable with the contents and is tangential to EA process.</li> <li>Meeting is also a commitment from tech session.</li> <li>A meeting summary will be posted to the public registry.</li> <li>All parties were invited to this workshop and there is a smaller meeting planned Oct 3 for parties that could not attend.</li> <li>Roundtable introductions. Susan Leech is TG's caribou consultant.</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>
<b>Wildlife</b> (Golder, Damian Panayi) Start 1:18pm End 2:00pm	<ul style="list-style-type: none"> <li>Presentation as per slide deck, which was circulated to parties in advance of meeting.</li> <li>Rohan Brown (GNWT) clarified that WMMP only needs to be approved if ENR Minister decides a WMMP is required.</li> </ul>	<ul style="list-style-type: none"> <li>None</li> </ul>
<b>Question and Answer Session</b> Start 2:00pm End 2:20pm	<ul style="list-style-type: none"> <li>Refer to Question and Answer table below.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to Question and Answer table below.</li> </ul>
<b>Closing Remarks</b> (GNWT - INF) End: 2:25pm	<ul style="list-style-type: none"> <li>Second session with WRRB next week; invite Tłıchǰ Government to the next session.</li> </ul>	<ul style="list-style-type: none"> <li>GNWT to invite Tłıchǰ Government to the next session. NSMA &amp; YKDFN to also be invited.</li> </ul>

### Open Question and Answer Session:

Topic/Keyword	Question/Comment	Response
Wildlife Plans	<ul style="list-style-type: none"> <li>Ginger: Does the WMMP v1 and the conceptual wildlife effects monitoring program (WEMP) still need to be reviewed?</li> </ul>	<ul style="list-style-type: none"> <li>Damian: The WMMP v2 incorporates the two earlier documents. For the purposes of the EA this is the last document to refer to. During the regulatory phase parties will look at an updated version that incorporates the comments from the EA. GNWT will consider a public review of the WMMP after the EA process is complete and before ENR Ministerial approval.</li> </ul>
Blast Radius	<ul style="list-style-type: none"> <li>Alan: What is considered the blast radius – is it within the radius where animals can hear or is just physical?</li> </ul>	<ul style="list-style-type: none"> <li>Damian: The starting point is the area around for which the blast supervisors determine physical harm can be done. What is considered harmful for humans is also considered harmful for wildlife.</li> </ul>
Boreal Caribou within the TASR	<ul style="list-style-type: none"> <li>Ginger: What do you know so far about the 20 boreal caribou collars deployed in March 2017, and how often will this information be reported or made public?</li> <li>Susan: Are the maps on the registry and do you have information on where they</li> </ul>	<ul style="list-style-type: none"> <li>James: We know that there are boreal caribou to the east and west of the TASR and south of Hwy 3; only four instances where movement paths cross the corridor. Might suggest that crossing the road will be infrequent.</li> <li>ENR hopes to deploy five remaining collars this winter</li> </ul>

	<p>were collared?</p>	<p>that will be put on individuals close to the corridor.</p> <ul style="list-style-type: none"> <li>• Maps are on the registry as a response to the ECCC IR#7 (<a href="#">PR#128</a>); other maps were posted on the registry today (<a href="#">PR#199</a>). The response to ECCC IR#7 also contains the information on where they were collared.</li> <li>• Reporting cycle will be annually, if not more frequently. An annual update would be required for the WMMP and wildlife research permits so it could be 2 reports per year depending on timing.</li> </ul>
Mitigation Audit	<ul style="list-style-type: none"> <li>• Ginger: Could you explain the mitigation audit in more detail?</li> </ul>	<ul style="list-style-type: none"> <li>• Damian: Look at p.49 of WMMP for the specific details. In practice, it would be conversation with the environmental monitors once a year. For example, what is happening in practice vs. what is proposed in WMMP – are there any changes, new mitigation; what is redundant/not being done in the field and why.</li> </ul>
Incorporating TK/on the ground learnings into the reporting	<ul style="list-style-type: none"> <li>• Ginger: How will the on the ground learnings be brought into the annual reporting, such as the Boots on the Ground caribou monitoring?</li> <li>• Should this request for the Boots on the Ground and TK considerations be incorporated into the comprehensive reports be made in our technical report?</li> </ul>	<ul style="list-style-type: none"> <li>• Damian: Comprehensive Reports should go beyond the data collected, and should also include a review of recent relevant information for the area. So the Boots on the Ground and TK considerations could be incorporated into these reports.</li> <li>• Stu: Yes.</li> <li>• Lorraine: It will also be captured in today's meeting notes which will be posted to the public registry.</li> </ul>
Adaptive Management	<ul style="list-style-type: none"> <li>• Alan: Look at Canadian Zinc Report of Environmental Assessment by the MVEIRB Appendix B. Describes an approach for adaptive management of a different road, which could be used as a model for adaptive management. The TASR WMMP looks at Monitoring but Management seems to be missing.</li> </ul>	<ul style="list-style-type: none"> <li>• Damian: Will read the Can Zinc report.</li> <li>• Refer to 6.2.1 and 6.2.2 of the WMMP for some Adaptive Management thresholds.</li> </ul>
Monitoring and Habitat Disturbance	<ul style="list-style-type: none"> <li>• Susan: Connecting monitoring of boreal caribou to levels of disturbance within the habitat.</li> </ul>	<ul style="list-style-type: none"> <li>• Damian: Refer back to the ASR and IR responses which present levels of disturbance within the boreal caribou range (NT1, North Slave Region, Wek'èezhì), and considers also reasonably foreseeable future projects. Can help track down the locations if you need it.</li> </ul>
Monitoring Predator Response	<ul style="list-style-type: none"> <li>• Susan: Will there be monitoring of predator responses and increases in predators along the road?</li> </ul>	<ul style="list-style-type: none"> <li>• Damian: Road Survey would detect predator hot spots or changes over time during construction, while the wildlife sightings, collisions monitoring and patrols will look for changes during operation. One of these existing protocols would catch these changes; these trends would be further explored in the comprehensive reports.</li> </ul>
Duration of Monitoring	<ul style="list-style-type: none"> <li>• Simon: Comprehensive Report after 5 years of monitoring – why 5 years? At what point would you determine if additional monitoring is required? What are the triggers for additional monitoring? When would TASR monitoring become part of normal ENR monitoring and normal operations?</li> </ul>	<ul style="list-style-type: none"> <li>• Damian: Comprehensive Report after construction and at 5 years of monitoring. Looking at similar operations, it takes time to collect sufficient data so you have something tangible to work with. Some triggers are suggested in the WMMP, but the analysis of the issues of the day and how best to proceed with managing them will be in the Comprehensive Report.</li> <li>• If an issue comes up before then though, it will be dealt with before the five years (part of the adaptive management response). There will also be a review of the mitigation annually.</li> <li>• James: There are triggers identified in the WMMP that</li> </ul>

		<p>would extend programs for longer. For example, traffic levels over a three year period (1.5x increase would trigger extending the programs longer). Some of the programs are an ongoing program and will likely continue. Can't say for sure for boreal caribou, but probably some sort of population monitoring, which would fall under the caribou strategy.</p> <ul style="list-style-type: none"> <li>• Barren ground caribou monitoring is ongoing; potentially boreal caribou as well; similarly with bison and moose.</li> <li>• We didn't identify specific thresholds, aside from traffic volume, that we are going to be monitoring, but we are going to answer those questions in the comprehensive reports.</li> <li>• Damian: Refer to literature review in Appendix G, which shows that detectable impacts to wildlife don't seem to occur until traffic levels are an order of magnitude higher than anticipated for the TASR. But monitoring is proposed regardless.</li> </ul>
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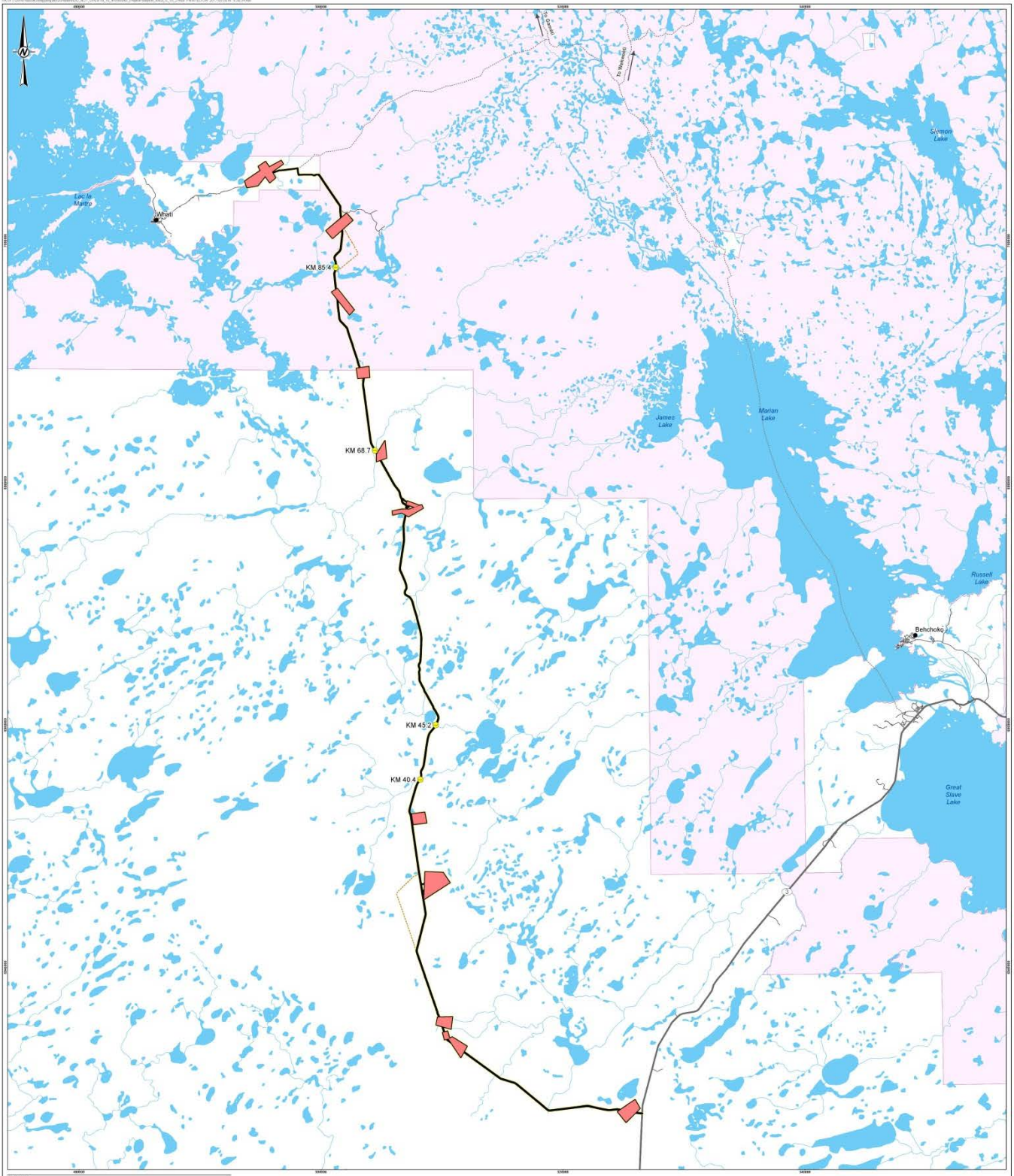


## Tłı̄cho All Season Road Updated Wildlife Management and Monitoring Plan (WMMP) Overview Meeting Agenda

**Date and Time:** September 28<sup>th</sup>, 2017 1:00 pm – 4:00 pm MST  
**Location:** Tree of Peace Friendship Centre, Yellowknife  
**Call-in information:** Conference line: 1-800-303-7189, Participant code: 7220032

TIME	SUMMARY	PRESENTER
1:00 pm – 1:10 pm	Registration	--
1:10 pm – 1:15 pm	Opening Remarks	GNWT – INF
1:15 pm – 1:20 pm	Introduction	Roundtable
1:20 pm – 2:00 pm	Presentation	Golder Associates – Damian Panayi
2:00 pm – 2:30 pm	Questions on Mitigation	Open floor
2:30 pm – 2:40 pm	Break	--
2:40 pm – 3:30 pm	Questions on Monitoring	Open Floor
3:30 pm – 3:50 pm	Next Steps	Golder Associates – Damian Panayi
3:50 pm – 4:00 pm	Closing Remarks	GNWT - INF





- LEGEND**
- BRIDGE LOCATION
  - PROJECT FOOTPRINT - BORROW SOURCE
  - PROJECT FOOTPRINT - ROAD
  - POPULATED PLACE
  - ALL-SEASON ROAD
  - LOCAL ROAD
  - WINTER ROAD
  - OLD AIRPORT ROAD
  - WATERCOURSE
  - TŁĪCHǫ LAND
  - WATER BODY



**DRAFT**

PROPOSED TŁĪCHǫ ALL-SEASON ROAD PROJECT FOOTPRINT

MAP 2

0 4,000 8,000  
1:100,000 METRES

**REFERENCES**  
1. BASE DATA OBTAINED FROM GEOGRAPHIC INFORMATION SYSTEMS, © DEPARTMENT OF NATURAL RESOURCES CANADA. ALL RIGHTS RESERVED.  
PROJECTION: UTM ZONE 11 DATUM: NAD83



# TASR Wildlife Management and Monitoring Plan

Overview Meeting  
28 September 2017  
Tree of Peace Friendship Centre



John Beaverho of Whatì assisting with environmental surveys of the potential TASR alignment, September 2017

First, thank you to all the parties for their involvement in this process  
Thanks to all the participants here today. Recognize that this is a quick turn-around,  
and we appreciate your involvement.

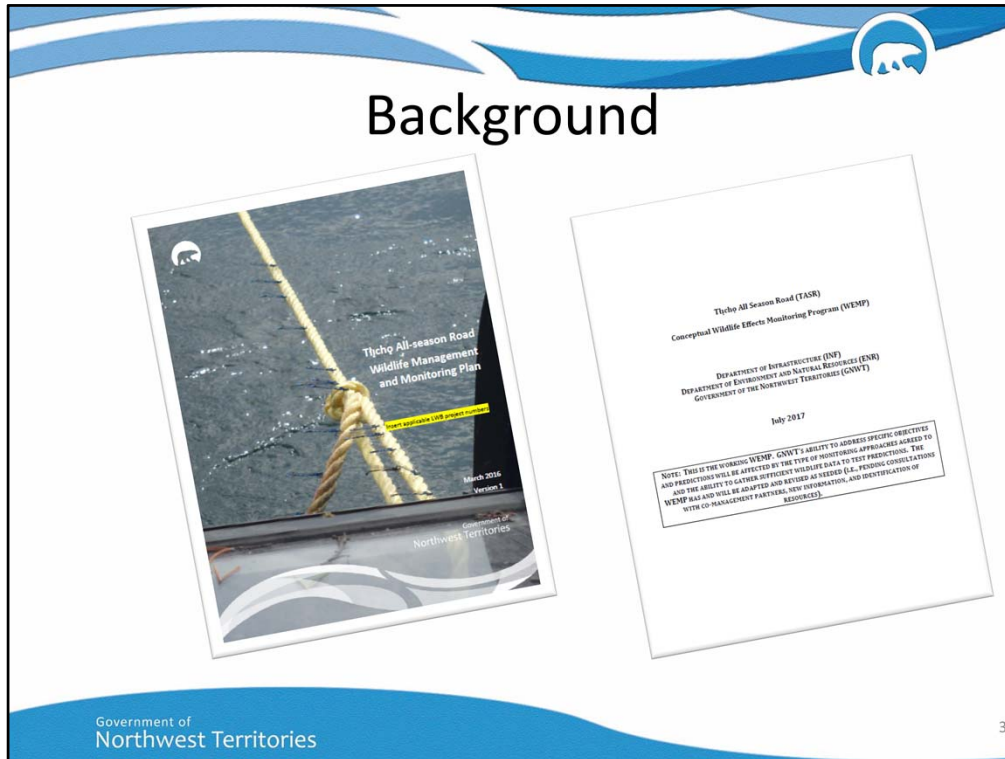


## Outline

- Background
- Commitments
- Mitigation
- Monitoring
- Reporting
- Questions



Questions at end of presentation



A conceptual Wildlife Management and Monitoring Plan was submitted with the original LUP application. Focus of the document was mitigating on-site wildlife concerns during construction. This August, a conceptual Wildlife Effects Monitoring Program was circulated, which outlined means of monitoring concerns related to construction and operation, extending beyond Project footprint.

Version 2 of the WMMP (which we are here to discuss today), merges these documents, and updates them to reflect the ASR and concerns raised to date regarding TASR impacts to wildlife during construction and operation.



## Background

- WMMP responds to both territorial and federal legislation
  - *Wildlife Act*
  - *Species at Risk (NWT) Act*
  - *Mackenzie Valley Land Use Regulations*
  - *Species at Risk Act*
  - *Migratory Birds Convention Act*
- See Table 1 and Appendix A for details

-The WMMP shows how the developer will follow legislation that protects wildlife. Most relevant is Section 95(2) of the NWT Wildlife Act, which requires that a developer prepare a Plan for *approval* by the Minister.



## Background

- WMMP Version 2 includes:
  - Merging of WMMP and WEMP into a single document
  - Learnings from existing operations
  - List of Species of Concern
  - Sensitive Periods for Wildlife
  - Adaptive Management
  - Expanded monitoring protocols and data sheets
  - Expanded role for the Environmental Monitors

Other new or expanded items to look for in WMMP v2



## Background: Commitments

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

This meeting is in part to meet requests made by Parties during the technical sessions in Behchoko, August 15 to 17.

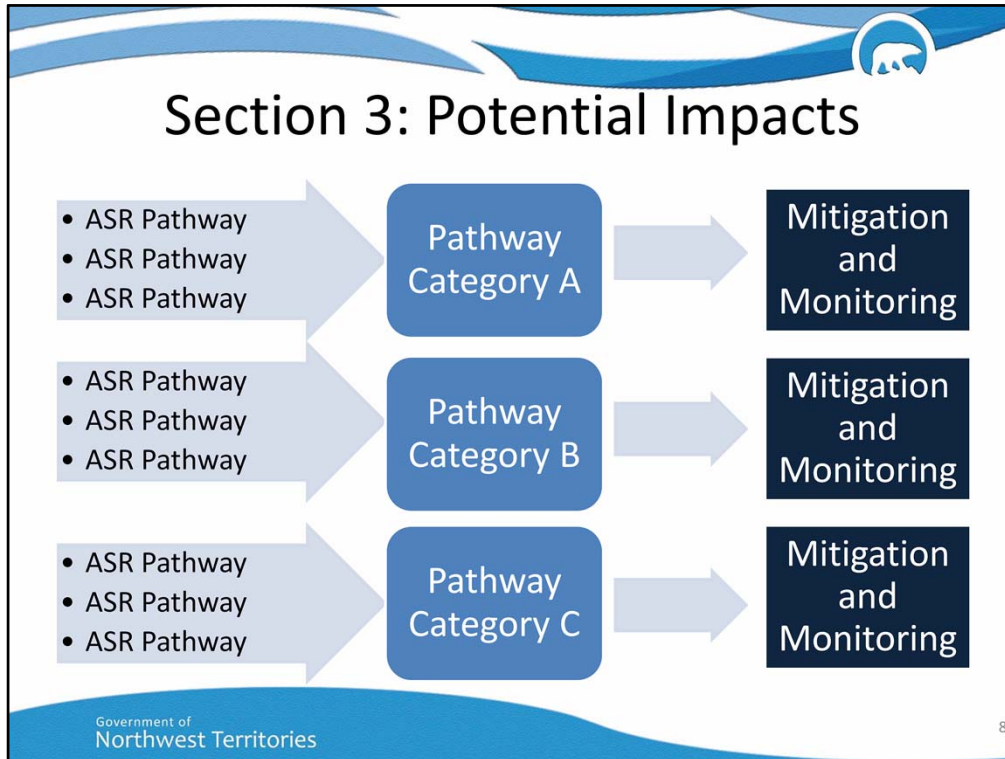


## Background: Commitments

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

Third bullet is reason for today's meeting





- Please refer to Table 4 of the WMMP
- The WEMP and WWHPP Guidelines require that the document consider concerns raised during EA process. Section 3 addresses this requirement.
- The ASR considered all the concerns raised during Project Scoping. In the WMMP, we reviewed these pathways, grouped them into larger Pathway Categories that captures related impacts
- Then identified mitigation and monitoring for each Pathway Category. Mitigation and Monitoring further divided in to Construction and Operations phases.



## Section 4: Mitigation

- As described in previous slide, mitigation is described for each Pathway Category
  - Direct Habitat Loss
  - Indirect Habitat Loss or Alteration
  - Sensory Disturbance
  - Direct Mortality
  - Access and Harvesting
- Divided also in to the Construction and Operations phases
- Proposed staff and public education
- Changes to mitigation since WMMP v1



The changes to mitigation since WMMP v1 reflect:

- concerns and suggestions raised to date
- a more detailed understanding of Project construction
- further consideration of the most effective way to mitigate impacts



## Section 5: Monitoring

### **Mitigation Monitoring (Section 5.1)**

- Wildlife Sightings Log
- Road Surveys
- Camp Surveillance
- Bird Nesting
- Blasting
- Wildlife Incidents

### **Effects Monitoring (Section 5.2)**

- Traffic
- Access and Harvesting
- Boreal Caribou Collaring
- Barren-Ground Caribou Collaring
- Moose and Bison Population Monitoring
- Wildlife Sightings and Collisions



# Mitigation Monitoring

## **Wildlife Sightings Log (Section 5.1.1)**

- Rationale
  - Allows all Project staff to record wildlife observations
- Methods
  - Wildlife Sightings Logs will be posted at all Project accommodations and offices
  - Project staff encouraged to document wildlife observations
  - Information compiled by Environmental Monitors



# Mitigation Monitoring

## Road Surveys (Section 5.1.2)

- Rationale
  - Provides a systematic approach to documenting wildlife observed along the constructed road
- Methods
  - All wildlife on the road or borrow pits will be documented by Environmental Monitors
  - Observations documented by kilometre of road, Environmental Monitors will act immediately if required (observations of nests in active areas, large mammals on the road, etc.)





# Mitigation Monitoring

## Camp Surveillance (Section 5.1.3)

- Rationale
  - Provides systematic and current information on wildlife activity around construction infrastructure
  - Intended to detect wildlife issues before they become problems
- Methods
  - Frequent and systematic inspections of construction infrastructure (accommodation camps, waste management areas, offices)
  - Document all wildlife and wildlife sign
  - Follow up on issues as necessary to reduce risk to wildlife





# Mitigation Monitoring

## **Bird Nesting (Section 5.1.4)**

- Rationale
  - Similar to Camp Surveillance, but specific to nesting birds
- Methods
  - Focus on construction infrastructure where migratory birds may nest (buildings, stationary equipment, quarries)
  - During spring and summer only



# Mitigation Monitoring

## **Pre-blast Surveys (Section 5.1.5)**

- Rationale
  - Confirm no large mammals in blast radius prior to blasting
  - Not yet confirmed if blasting will be required
- Methods
  - Systematic scan for large mammals within the blast radius prior to each blast





# Mitigation Monitoring

## **Wildlife Incidents (Section 5.1.6)**

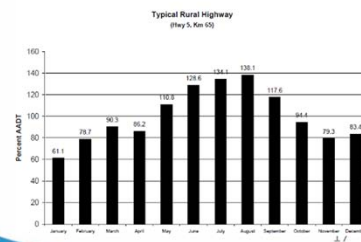
- Rationale
  - To document and learn from wildlife incidents
  - Includes human-wildlife interactions, risks to wildlife, wildlife deterrent actions, damage to property
- Methods
  - Environmental Monitors will document incident, collect photos, suggest follow-up, and report to Project Supervisor



# Wildlife Effects Monitoring

## Traffic Monitoring (Section 5.2.1)

- Rationale
  - To confirm that operational traffic levels are within the predicted range
- Methods
  - Install permanent automatic traffic monitor on the TASR
  - Report on daily and monthly averages





# Wildlife Effects Monitoring

## Access and Harvest Monitoring (Section 5.2.2)

- Rationale
  - Concerns about impacts to wildlife from improved access
- Methods
  - In consultation with Tłı̄chǫ Government
  - New Renewable Resource Officer in Whati
  - Regular patrols
  - Longer season and new location for the road checkpoint during winter barren-ground caribou harvest season
  - Potential for expanding community-based harvest monitoring
  - Potential for more aerial surveys during barren-ground caribou harvesting season
  - Continue moose jaw collection program



GNWT ENR and INF Checkpoint  
on Highway 3  
September 2017



# Wildlife Effects Monitoring

## **Boreal Caribou Collaring (Section 5.2.3)**

- Rationale
  - Species at Risk
  - Little known about boreal caribou in the North Slave region
  - Outstanding questions of how they will react to the TASR
- Methods
  - In consultation with Tłıchǫ Government
  - 20 collars deployed in March 2017
  - Programmed for geofencing (hourly locations within 10 km of the TASR)
  - During construction, collared caribou near Project will be communicated to the Project Supervisor (See Appendix E)
  - During operations, collar information can be used to inform wildlife management decisions



# Wildlife Effects Monitoring

## **Barren-Ground Caribou Collaring (Section 5.2.4)**

- **Rationale**
  - Valued species in the NWT
  - Overlap with the TASR is infrequent, but TASR provides access to winter roads in barren-ground caribou range
- **Methods**
  - In consultation with Tłıchǫ Government
  - GNWT attempts to maintain 50 collared Bathurst caribou
  - During construction, collared caribou near Project will be communicated to the Project Supervisor
  - During operations, collar information can be used to inform wildlife management decisions



# Wildlife Effects Monitoring

## **Moose and Bison Population Monitoring (Section 5.2.5)**

- Rationale
  - Species at Risk (bison) and important big game species (moose)
  - TASR may provide improved access for harvesting, range expansion, road avoidance, vehicle collisions
- Methods
  - Aerial surveys for moose and bison, late winter every three years
  - Initiate in 2018 before construction begins
  - Results will be used to inform wildlife management decisions



# Wildlife Effects Monitoring

## Wildlife Sightings and Collisions (Section 5.2.6)

- Rationale
  - Concern regarding wildlife injury and mortality from collisions
  - Need to document if there are sections of the TASR prone to collisions
  - Concern about expansion of Mackenzie bison range
- Methods
  - Already conducted for all NWT Highways, confirming that monitoring will expand to include the TASR
  - GNWT Inter-departmental working group to develop an internal wildlife collision and reporting smartphone app and database



## Section 6: Reporting and Adaptive Management

- **Weekly Reports**
  - Document what occurred during the past week
- **Annual Reports**
  - Review what happened over the past year
  - Document if and how mitigation changed
- **Comprehensive Report**
  - Detailed trend analysis following construction and following 5 years of operational monitoring
- **Adaptive Management**
  - Mitigation Audit





## Questions?



Bison and ATV tracks  
September 2017

Thanks all for your time. Would like to hear your thoughts.