

Government of  
Northwest Territories

March 20, 2024

RICHARD EDJERICON  
MLA, TU NEDHE - WIILIDEH**Oral Question 41-20(1) Łutselk'e Road Access**

This letter is in response to the Oral Question raised on February 09, 2024 regarding winter road access to Łutselk'e. I committed to providing information on the studies conducted, efforts made, and challenges faced regarding the Łutselk'e winter road.

The Department of Infrastructure supports improving road access to remote communities to reduce the cost of living, increase mobility, and improve the quality of life for residents. The improvements must be safe, feasible, and affordable.

Trucking fuel on an ice road over Great Slave Lake will increase environmental risk and increase the cost of fuel in the community by approximately 15 cents per litre. The community of Łutselk'e is currently serviced by MTS for its resupply of fuel and dry goods.

The estimated cost to construct and maintain a winter road to Łutselk'e is a minimum of \$2 million dollars annually. This figure is based on the construction of the Tłıchł winter road which is \$2.2 million with an additional \$650 thousand for maintenance. Note that these costs will increase with any significant weather events. For example, the annual budget for the Inuvik-Tuktoyaktuk Highway (ITH) is \$2 million, however this year the ITH has already incurred an additional minimum \$400,000 with the season not yet over. We would anticipate that daily maintenance checks of a winter road to Łutselk'e will be required, and possibly 24-hour monitoring for problematic areas.

Building a winter road to Łutselk'e presents many challenges with respect to safety, construction and maintenance, further detail is provided in the Attachment.

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These challenges continue to outweigh the possible benefits to the community. Safety is the Government of the Northwest Territories' top priority on NWT highways and ice roads.

Thank you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Caroline Wawzonek', with a stylized flourish at the end.

Caroline Wawzonek  
Minister, Infrastructure

Attachment

- c. Clerk of the Legislative Assembly  
Director, Legislative Affairs and House Planning

## ATTACHMENT - Łutselk'e Winter Road Anticipated Challenges

### Anticipated Challenges During Construction

#### *Pressure Ridges*

- Constructing over and breaking through vertical ice ridges involves using heavy equipment to break through these sections. Additionally, water or snow can be used to flood and cover the ice sheet, aiding in the construction process.
- Constructing over horizontal gaps in the ice sheet.
- The use of rig mats and flooding, which can lead to safety concerns and substantial time delays in both scenarios.

#### *Rough – Wind Blown Ice*

- Rough, wind-blown ice can hinder construction over vertical ice sheets. This condition is extremely hard on equipment and has the potential to significantly delay the construction schedule.

#### *Ice Thickness – Center Area of Lake*

- Ice thickness in the center area of the lake poses challenges as this ice is the last to freeze. This can lead to delays for construction crews crossing the lake from the north to the south side. Additionally, timelines and historic ice thicknesses in this area are unknown, adding to the complexity of the situation.

#### *Strong Currents – inlets, Islands, & Rocks.*

- Strong currents in inlets, islands, and around rocks are expected to be problematic along the route, potentially hindering ice growth. Prior to commencing construction activities, the proposed alignment will need to be thoroughly investigated to mitigate these challenges.

#### *Winter Storm Events:*

- Winter storm events pose challenges due to the constantly changing weather conditions on Great Slave Lake. Additional crews and equipment will be needed to keep already constructed areas open and ensure safe access for construction crews to continue work on the east end. Continuous snow-clearing and monitoring of pressure ridges will also be necessary.

## **Anticipated Challenges During Maintenance Activities**

### *Maintenance Camp*

The establishment of a "Maintenance Camp" around the halfway point of Great Slave Lake would be required, presenting additional costs and permitting requirements. This camp would provide more accurate weather monitoring and enable an expedited response to adverse weather events. Additionally, the camp would serve as an emergency response center from the center point and as an emergency layover location for stranded motorists.

### *Pressure Ridges*

- Pressure ridges require continual monitoring, including daily checks, due to their active nature. Depending on daily activity and extreme temperature changes, specific locations may require 24-hour monitoring. Ongoing maintenance crews, including flooding crews, ice profile crews, and snowcats or other heavy equipment, may be needed throughout the season, particularly in more extreme cases.
- Pressure ridges are a public safety concern and are likely to cause sporadic ice road closures.

### *Ice Thickness – Center Area of Lake*

- Ice thickness in the center area of Great Slave Lake is a concern as this ice is the last to freeze. This delay in freezing can hinder crossing the lake from the north to the south side and may result in reduced weight capacities for vehicles.

### *Strong Currents – Inlets, Islands, & Rocks.*

- Strong currents in inlets, islands, and around rocks are expected to be problematic along the route, negatively impacting ice growth. This can lead to reduced weight capacities for vehicles in these areas.

### *Winter Storm Events*

- Winter storm events pose challenges due to the constantly changing weather conditions on Great Slave Lake. Additional manpower and equipment will be required to safely maintain the ice crossing. Continual snow-clearing and monitoring of pressure ridges will also be necessary to ensure safe passage.

*GPR – Ice Profiling*

- Ice profiling using Ground Penetrating Radar (GPR) will likely be required weekly while the road is open to the public. Additional profiling may be necessary if there are problematic pressure ridges or cracks. Contracting out this service would substantially increase maintenance costs. Alternatively, performing ice profiling in-house would require additional equipment and human resources.