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August 22, 2024

File: G24X002 and G24L8-002

Mark Cliffe-Phillips
Mackenzie Valley Review Board
200 Scotia Centre
Box 938, 5102-50th Avenue
Yellowknife NT X1A 2N7

Sent by email

Dear Mark Cliffe-Phillips,

Re: GNWT-INF – Notice of Preliminary Screening Determination – Application for Land Use Permit and Water Licence – Culvert Replacement km 147.0, Dempster Highway #8.

The Gwich'in Land and Water Board (Board) met on August 22, 2024 and considered the Application Package from Government of the Northwest Territories Department of Infrastructure (GNWT-INF) for Land Use Permit (Permit) G24X002 and G24L8-002 for Culvert Replacement at km 147.0, Dempster Highway #8. (Project) in accordance with the *Mackenzie Valley Resource Management Act* (MVRMA).

The Board conducted a preliminary screening based on the public record for the proceeding. Based on the evidence provided, the Board is satisfied the screening has been completed according to section 125 of the MVRMA and has decided **not to refer** the Project to environmental assessment. The Board's Preliminary Screening Determination and Reasons for Decision, as required by section 121 of the MVRMA, is attached.

If the Board does not receive notice of referral to environmental assessment, it can proceed with issuance of Permit G24X002 and G24L8-002 on **Tuesday September 3, 2024**

The Board and staff look forward to continued communications throughout the pause period. Please contact AlecSandra Macdonald via [email](#) or at (867) 777-4954 with any questions or concerns regarding this letter.

Yours sincerely,

A handwritten signature in grey ink, appearing to read "Elizabeth Wright", with a small arrow pointing to the right at the end of the signature.

Elizabeth Wright
Chair, Gwich'in Land and Water Board

Bcc'd to: Gwich'in Distribution List
Mahabub Rahman (GNWT-INF)

Attached: Preliminary Screening Determination and Reasons for Decision



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Preliminary Screening Determination and Reasons for Decision

Land Use Permit and Water Licence Applications	
File Number	G24X002 and G24L8-002
Company	Government of the Northwest Territories – Department of Infrastructure
Project	KM 147.0 Culvert Replacement
Location	Dempster Highway #8
Activity	Land and Water Use for Culvert Replacement.
Date of Decision	August 22, 2024

Decision

In accordance with subsection 124(1) of the [Mackenzie Valley Resource Management Act](#) (MVRMA), the Gwich'in Land and Water Board (GLWB or Board) met on August 22 2024 to make a preliminary screening determination on the Application from Government of the Northwest Territories – Department of Infrastructure (GNWIT-INF; the Applicant) for Land Use Permit G24X002 (Permit)¹ and Water Licence G24L8-002 (Licence)² for the KM 147.0 culvert replacement project (Project) on Dempster Highway #8.

The Board has decided not to refer the proposed Project to the Mackenzie Valley Environmental Impact Review Board (the Review Board) for Environmental Assessment because, based on the evidence, it is the Board's opinion that the proposed changes to the Project will not have a significant adverse impact on the environment or be a cause of public concern.

The Board's determination, including reasons for its decision, are detailed in sections [3.0](#) and [4.0](#).

¹See GLWB Online Registry for [G24X002](#)

² See GLWB Online Registry for [G24L8-002](#)

Background and Scope of Screening

GNWT-INF applied for a new Type A land use permit (permit) and a new Type B water licence. The purpose of these Applications is to replace a culvert located at km 147.0 Dempster Highway #8.

As per the LWB Engagement Policy, the Applicant conducted Engagement between December 2023 and June 2024. The Following parties were engaged, as described in the Project Engagement Record and Engagement Plan.³

- Gwich'in Tribal Council

In accordance with paragraph 125(1)(a) of the [MVRMA](#), the Board must conduct a preliminary screening of the proposed changes to the Project to determine and report to the Review Board whether, in its opinion, the proposed changes to the Project might have a significant adverse impact on the environment, or might be a cause of public concern. The details of the Board's analysis are set out in section [4.0](#) below.

3.1 Scope of Screening:

New Areas and Activities

A new 3000 mm by 65.4 m culvert will be installed on the unnamed creek via a trenchless installation methodology, and the existing 2500 mm diameter culvert shall be decommissioned via grouting. The project will involve rerouting the creek at the crossing location to accommodate flow through the new culvert and avoid potential erosion and further degradation of the existing culvert.

A tunnel boring machine will be used, which requires the use of lands outside of the highway right-of-way and on Gwich'in private lands and GNWT Territorial lands. Water for the Project will be withdrawn from the Mackenzie River. A total maximum of 105 m³ of water will be withdrawn for the Project, for the purpose of grout mixing and civil works. The Applicant has requested a two year term for both the Permit and Licence. This Project is outside the scope of existing Permit G21E001, which authorizes the operation and maintenance of the Dempster Highway #8 within the right-of-way.⁴

3.2 Public Record and Regulatory Proceeding

To assist the Board in its preliminary screening determination for the Project, Board staff distributed the Applications and a draft Permit and Licence for public review on July 18, 2024, inviting reviewers to provide comments and recommendations on the Applications and the preliminary screening (e.g., on

³ See GLWB Online Registry for [GNWT-INF - Dempster Culverts km 147.0 - Engagement Plan and Record - Jul12_24](#)

⁴ See GLWB online registry for [G21E001](#)

impacts and mitigation measures) using the Online Review System (ORS).⁵ Comments and recommendations were received by the deadline of April 18, 2024 from the following parties:

- Gwich'in Tribal Council – Department of Cultural Heritage (GTC DCH)
- Transport Canada

Since there were no requests to extend the reviewer comment deadline, the Board is satisfied that a reasonable period of notice was given to affected communities and First Nations, as required by subsection 63(2) of the [MVRMA](#).

Potential Impacts and Proposed Mitigations

Table 1 below summarizes:

- the potential impacts of the proposed Project;
- the concerns that were identified during the regulatory proceeding and how the Applicant addressed those concerns;
- the proposed and potential mitigations for the potential impacts; and
- the Board's analysis of the potential impacts and proposed mitigations.

⁵ See GLWB Online Review System for [New Type A Land Use Permit and Type B Licence Applications \(G24X0022 and G24L8-002\)](#)

Table 1: Potential Impacts and Proposed Mitigations for the Proposed Changes to the Project

Potential Impact	Activity	Proposed Mitigations <i>Description of measures to reduce potential impacts, including consideration of cumulative impacts and climate change.</i>	Board Analysis and Determination
<p>Soil contamination</p> <p>Changes to water quality</p>	<p>- Transfer, storage, and use of petroleum products and/or chemicals</p> <p>- Waste Disposal</p>	<ul style="list-style-type: none"> • The Applicant has developed spill contingency and waste management plans to prevent spills and waste contamination. • The Board has standard permit conditions that are typically used to mitigate the potential impacts. These standard conditions include: <ul style="list-style-type: none"> ○ WASTE MANAGEMENT ○ REPAIR LEAKS ○ FUEL STORAGE SETBACK ○ SECONDARY CONTAINMENT – REFUELING ○ FUEL CONTAINMENT ○ SPILL CONTINGENCY PLAN ○ SPILL RESPONSE ○ DRIP TRAYS ○ CLEAN UP SPILLS ○ REPORT SPILLS 	<p>No concerns were brought to the Board’s attention during the application public review period.</p> <p>Based on the described mitigations, it is the Board’s opinion that the proposed activities will not have a significant adverse impact on the environment and will not be a cause of public concern.</p>
<p>Changes to Water Quality/Flow Level</p>	<p>In water works</p>	<ul style="list-style-type: none"> • The Applicant has developed a Environmental Protection Plan Specific to Watercourses. • The installation of a temporary isolation dam could potentially alter water flow and subsequently result in water level changes. To mitigate this impact, the worksite dewatering system will be set up with a pump that will be inserted into the accumulated water within the worksite. The water will be discharged on the outside of the downstream side of the work area, filtered, deposited, and reintroduced into the downstream flow at an equal or better quality than extracted baseline values. 	<p>No concerns were brought to the Board’s attention during the application public review period.</p> <p>Based on the described mitigations, it is the Board’s opinion that the proposed activities will not have a significant adverse impact on the environment and will not be a cause of public concern.</p>

		<ul style="list-style-type: none"> • installation of culvert may cause localized sediment increases. To mitigate this, surficial soils will be from the work area will be stockpiled away from the watercourse. In addition, grade cuts from the work area will be removed and stockpiled separately from the surficial soils. Furthermore, silt fencing will be installed on the edge of the work area to alleviate potential sedimentation from entering watercourse. • The Board has standard permit conditions that are typically used to mitigate the potential impacts. These standard conditions include: <ul style="list-style-type: none"> ○ PROGRESSIVE EROSION CONTROL ○ REPAIR EROSION ○ CULVERT SIZE 	
Changes to Aquatic Habitat		<ul style="list-style-type: none"> • Instream work from July 15 to September 15 is being considered to avoid the spring and fall spawning restricted activity windows. Instream work for the open window of July 15 to September 15 will avoid spring/summer spawning time. Habitat for large bodied fish is limited. Habitat would be available for forage fish species during the early open water season after spring freshet. Spawning habitat is only present for forage species. • Installation of culvert can cause localized sediment increases, which can affect the health of aquatic organisms. To mitigate this, sediment and erosion controls will be implemented as needed. • The Board has standard permit conditions that are typically used to mitigate the potential impacts. These standard conditions include: <ul style="list-style-type: none"> ○ PROGRESSIVE EROSION CONTROL ○ REPAIR EROSION ○ CULVERT SIZE 	<p>No concerns were brought to the Board’s attention during the application public review period.</p> <p>Based on the described mitigations, it is the Board’s opinion that the proposed activities will not have a significant adverse impact on the environment and will not be a cause of public concern.</p>

Disturbance to ground, permafrost, vegetation	Use of equipment	<ul style="list-style-type: none"> • There is a potential for the stream banks to erode or become destabilized due to construction. To mitigate this issue, willow staking will be implemented on the watercourse banks to stabilize disturbed areas and promote growth. Additionally, seeding and installation of coconut matting to promote expedited regrowth and stabilization of the project footprint. • Introducing non-native invasive species can be detrimental to the local ecosystem. To mitigate this, equipment will be decontaminated based on best practices (i.e., Alberta Decontamination Protocol 2017). In addition, equipment will be cleaned of all mud, dirt, and vegetation prior to the equipment entering the water body or the area adjacent to the water body. Will remove any visible plant or plant fragments from the equipment • There is a potential for the compaction of vegetation due to the construction process. To mitigate this issue, willow staking will be conducted on the watercourse banks to stabilize disturbed areas and promote growth. Additionally, seeding and installation of coconut matting to promote expedited regrowth and stabilization of the project footprint. Will minimize footprint by using designated egress and ingress pathways. • The Board has standard permit conditions that are typically used to mitigate the potential impacts. These standard conditions include: <ul style="list-style-type: none"> ○ MINIMIZE AREA CLEARED 	<p>No concerns were brought to the Board’s attention during the application public review periods.</p> <p>Based on the described mitigations, it is the Board’s opinion that the proposed activities will not have a significant adverse impact on the environment and will not be a cause of public concern.</p>

		<ul style="list-style-type: none"> ○ FINAL CLEANUP AND RESTORATION ○ NATURAL REVEGETATION 	
Wildlife Disturbance	Use of Equipment	<ul style="list-style-type: none"> • Potential for wildlife collisions along highway. Mitigation measure includes a posted speed based on the safety for travellers. Should wildlife collisions occur appropriate regulatory authorities will be contacted (ex. ENR, ECCC). • The Board has included permit conditions that are typically used to mitigate the potential impacts. The conditions include: <ul style="list-style-type: none"> ○ HABITAT DAMAGE ○ CARIBOU DISTURBANCE ○ TRADITIONAL USE 	Based on the described mitigations, it is the Board's opinion that the proposed activities will not have a significant adverse impact on the environment and will not be a cause of public concern.
Heritage Resources	Use of Equipment	<ul style="list-style-type: none"> • The Board has standard permit conditions that are typically used to mitigate the potential impacts. These standard conditions include: <ul style="list-style-type: none"> ○ ARCHAEOLOGICAL BUFFER ○ SITE DISTURBANCE ○ SITE DISCOVERY AND NOTIFICATION 	<p>No concerns were brought to the Board's attention during the application public review period.</p> <p>Based on the described mitigations, it is the Board's opinion that the proposed activities will not have a significant adverse impact on the environment and will not be a cause of public concern</p>

4.1 Consideration of Potential Impacts

Based on the potential impacts and proposed mitigations identified above in Table 1, the Board considered whether the changes to the Project might have a significant adverse impact on the environment. In general, impacts of the changes to the Project on the environment can be mitigated through the use of permit conditions of two general types:

1. conditions in the existing Permit, including requirements for management and monitoring plans, with revisions where necessary; and
2. new or unique conditions that may be needed to mitigate potential impacts of the changes to the Project that may not be addressed by the conditions in the existing Permit, and which may be from the Board's standard conditions list or established by the Board as per the LWB [Standard Process for Creating New Conditions](#).

These conditions may include requirements for management and monitoring plans that provide detailed information regarding the implementation of mitigation measures and the evaluation of their effectiveness.

A draft Permit and Licence were circulated for review during the regulatory proceeding, and all Parties were given the opportunity to provide comments and recommendations on the draft conditions. In finalizing the conditions, the Board will consider all of the evidence provided through the regulatory proceeding.

4.2 Consideration of Public Concern

In addition to considering the potential impacts of the changes to the Project, the Board considered whether the changes to the Project might be a cause of public concern. Based on the evidence provided during the regulatory proceeding the Board did not identify any comments or issues that indicate that the Project is a cause of public concern.

5.0 Conclusion

The Board has conducted a preliminary screening of the Project. The Board has reviewed all the evidence received during the regulatory process with respect to the Preliminary Screening of the proposed changes to the Project. Based on the evidence, it is the Board's opinion that the proposed Project will not have a significant adverse impact on the environment or be a cause of public concern, as set out in paragraph 125(1)(a) of the [MVRMA](#). The Board has therefore decided not to refer the proposed Project to Environmental Assessment. If the Board does not receive a notice of referral to environmental assessment by September 1 2024 the Board can issue the Permit and Licence on Tuesday September 3, 2024.



Elizabeth Wright, Chair
Gwich'in Land and Water Board

August 22, 2024

Date