



## GWICH'IN LAND AND WATER BOARD

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### Reasons for Decision

Issued pursuant to paragraph 22(2)(b) of the *Mackenzie Valley Land Use Regulations* (MVLUR)

File Number:	G18Q004	Type:	"A" Land Use Permit Application
Applicant:	GNWT Department of Infrastructure		
Activity:	Extracting, crushing, stockpiling, loading and hauling granular material, Km 147, Dempster Highway #8		
Board Meeting:	February 19, 2019		

With respect to this application, notice was given in accordance with sections 63 and 64 of the *Mackenzie Valley Resource Management Act (MVRMA)*. There was no public hearing held in association with this application.

#### 1. Background

Item	Date
LUP Application Received	Sept 21, 2018
Application Deemed Complete	Oct 1, 2018
Application Circulated for Review	Oct 1, 2018
Review Deadline	Oct 22, 2018
Board Meeting # 1 (Board directive for additional study)	Oct 29, 2018
Information meeting	Nov 14, 2018
Additional Information submitted by proponent	Jan 8, 2019
Additional Information circulated for review	Jan 9, 2019
Review Deadline	Jan 30, 2019
Board Meeting #2	Feb 19, 2019

#### 2. Discussion

On September 21, 2018, the GNWT Department of Infrastructure (INF) submitted an application for a Type "A" Land Use Permit for the purpose of quarrying at km 147, Dempster Highway #8. The applicant requested a term of 5 years, with a proposed start date in October 2018.

The proposed land use area is located approximately four kilometers north of Tsiigehtchic and 600 meters

east of the Mackenzie River. It is on GTC Private Lands and is an historic quarry, however records indicate that no extraction has taken place since 1991. There are no previous GLWB authorizations at this location, and detailed files from DIAND/GNWT Lands were unavailable. GLWB staff were instructed to treat this application as a new development, subject to preliminary screening and engagement requirements.

The original application indicated that work would take place along the disturbed face of the historic quarry, in an area that is approximately 50 m from a lake to the south and 50 m from a creek to the north. During the application review, the lake was identified as fish habitat and a source of local drinking water, and where the creek flows into the Mackenzie it forms an eddy that is used for fishing<sup>1</sup>. The area was also identified as having high value for traditional use activities, and as having potential for archeological resources<sup>2</sup>. Reviewers spoke in particular to concerns regarding the potential for impacts to the two water bodies, and the standard condition limiting quarry operations to greater than 100m from the ordinary high-water mark of the watercourses was supported<sup>3</sup>.

The Gwich'in Land and Water Board (GLWB) met on October 30, 2018 to consider the application and determined that pursuant to paragraph 22(2)(b) of the Mackenzie Valley Land Use Regulations, further study needed to be conducted on the application<sup>4</sup>.

Specifically, the Board requested further information on spill contingency planning, sediment and erosion control, and any other mitigation measures that supported GNWT INF's plan to perform quarrying activities within 100m of the ordinary high-water mark of the watercourses. The GLWB directed INF to provide an updated Quarry Operations Plan (QOP), an updated Spill Contingency Plan (SCP), and an updated Sediment and Erosion Control Plan (SECP). The Board also directed Board Staff to hold a meeting to bring together interested parties to discuss issues that have been raised during the review of the LUP application.

The meeting was held on November 14, 2018<sup>5</sup>, and the supplemental information package<sup>6</sup> was submitted to the GLWB on January 8, 2019. In addition to the requested documents, INF further included a Wildlife Management Plan (WMP) and a Fish and Fish Habitat Protection Plan (FFHPP).

The new QOP calls for excavation to take place in a previously undisturbed area of the quarry, which would allow INF to maintain the 100m setback from each of the two water courses. The updated QOP indicates that 100,000 m<sup>3</sup> of granular resources will be extracted from the pit over 5 years. In order to access the granular resources, approximately 15,000 m<sup>3</sup> of organic material will be removed and stockpiled. These stockpiles, as well as the piles of crushed materials, will be stored the 100 m from the waterbodies, and contoured to prevent erosion. According to the QOP, the proposed crushing activities will take place approximately 25 m from the Dempster Highway.

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<sup>1</sup> See GLWB Online Registry for [G18Q004 - Public Review Comments - Oct22\\_18](#)

<sup>2</sup> See GLWB Online Registry for [G18Q004 - Public Review Comments - Oct22\\_18](#)

<sup>3</sup> See GLWB Online Registry for [G18Q004 - Public Review Comments - Oct22\\_18](#)

<sup>4</sup> See GLWB Online Registry for [G18Q004 - 22.2.B Request for Further Studies - Oct30\\_18](#)

<sup>5</sup> See GLWB Online Registry for [G18Q004 - Meeting Minutes -Nov14\\_18](#)

<sup>6</sup> See GLWB Online Registry for [G18Q004 - GNWT INF - Additional Information Package - Jan08\\_19](#)

The QOP estimates that 70% of the volume of overburden will be lost due to moisture evaporation/melting. INF indicates that it will contour the site and employ the mitigation measures necessary to prevent drainage into the water bodies, and subsequent sediment loading. There is a potential for massive ice deposits to be uncovered at the quarry; if encountered they would be covered by a minimum of 2 meters of granular material, so to prevent thawing and ground subsidence. Overburden will be used for reclamation activities.

### 3. Reviewer Comments<sup>7</sup>:

By January 30, 2019 comments on the supplemental information package were received from:

- Environment and Climate Change Canada (ECC)
- GNWT Environment and Natural Resources (ENR)
- GNWT Department of Lands
- Gwich'in Tribal Council Department of Cultural Heritage (GTC DCH)
- Prince of Wales Northern Heritage Center (POWNHC)

The updated QOP indicates that INF will be opening up a different area than identified in the original application; this will require the removal overburden and the excavation of undisturbed land. The GTC DCH identified the area as being traditionally important, and both the GTC DCH and POWNHC recommend an Archeological Impact Assessment be conducted, due to high potential for archaeological resources.

GNWT Lands and GRRB recommend geotechnical work be conducted prior to opening the proposed work area, so to determine ice content, as melting ice could lead to sedimentation into adjacent waterbodies, or to slumping, should massive ice deposits be unearthed. This is a particular concern due to nearby waterbodies, which are used for fishing and drinking water sources. GNWT Lands indicated that other nearby quarries with similar conditions (km 34, km 36.7 and Midway Lake), over stripping has resulted in significant environmental degradation. It was also noted in the GTC quarry permit that the volume of granular resources within the pit was unconfirmed.<sup>8</sup>

GRRB and GNWT Lands recommended that a detailed pit development plan be drafted prior to the opening up of the proposed work area. GNWT Lands also voiced concerns that the crusher will be set up too close to the highway, posing a potential safety hazard and contributing additional dust to an already dusty stretch of road.

There were also concerns surrounding the management plans that were (re)submitted. It was noted that the updated SCP does not consider site specific information and drainage (Lands) and still requires updates to contact information and reporting requirements (ENR, GRRB). Lands also commented that the proposed SECP lacks details, while GRRB identified that it does not account for mitigation measures for fines (dust) into adjacent waterbodies. GRRB commented that The WMP required further updates to include current species at risk (GRRB). Both the GRRB and ECCC noted that the WMP fails to consider bank swallows, and GRRB commented that it also does not provide

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<sup>7</sup> See GLWB Online Registry for [G18Q004 - Public Review Comments – Jan30\\_19](#)

<sup>8</sup> See GLWB Online Registry for [G18Q004 - GTC Lands and Resources Quarry Access Authorization - Sep21\\_18](#)

evidence that there will be no adverse effects to raptors, as required by the Gwich'in Land Use Plan (GRRB).

**4. Decision:**

On February 19, 2019 the Board met and determined that under paragraph 22(2)(b) of the Mackenzie Valley Land Use Regulations further studies or investigations need to be conducted in order to:

- a) gather information to determine the potential for archeological resources in the proposed work area; and
- b) delineate the quantity of granular material, the volume and location of massive ice deposits, and to develop an appropriate pit development plan to extract the resources.

SIGNATURE



February 19, 2019

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Elizabeth Wright  
Chair, Gwich'in Land and Water Board

\_\_\_\_\_  
Date

Elizabeth Wright,  
Chair, Gwich'in land and Water Board

CC: Dan Carmichael – Superintendent – GNWT Department of Lands, Beaufort Delta Region  
Steven Charlie – Director – Gwich'in Tribal Council Department of Lands and Resources