



P.O. Box 32, Wekweètì, NT X0E 1W0
Tel: 867-713-2500 Fax: 867-713-2502

#1-4905 48th Street, Yellowknife NT X1A 3S3
Tel: 867-765-4592 Fax: 867-765-4593
www.wlwb.ca

June 18, 2020

File: W2016L8-0001

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

Sent by email

Dear Mark Cliffe-Phillips,

Re: Notice of Preliminary Screening Determination – Amendment Application for Water Licence W2016L8-0001 – [Tłjchq All-Season Road, NT]

The Wek'èezhii Land and Water Board (Board) met on June 18, 2020 and considered the Application from the Government of the Northwest Territories Department of Infrastructure (GNWT-INF) to amend its Type B Water Licence (Licence) [W2016L8-0001] for the Tłjchq All-Season Road (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 reasons for decision, as required by section 121 of the MVRMA, are provided below.

If the Board does not receive notice of referral to environmental assessment, it will continue the Water Licensing process.

Our Board and staff look forward to continued communications throughout the pause period. If you have any questions or concerns regarding this letter, please contact Chris Hotson at (867) 766-7459 or email chotson@mvlwb.ca.

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Joseph Mackenzie', is written over a light blue circular stamp.

Joseph Mackenzie
Chair, Wek'èezhii Land and Water Board

Copied to: TASR Distribution List
Ziaur Rahman, GNWT-INF



Box 32, Wekweètì, NT X0E 1W0
Tel: 867-713-2500 Fax: 867-713-2502

#1-4905 48th Street, Yellowknife, NT X1A 3S3
Tel: 867-765-4592 Fax: 867-765-4593
www.wlwb.ca

Reasons for Decision

Reference/File Number:	W2016L8-0001 (Type B Water Licence)
Permittee:	Government of the Northwest Territories Department of Infrastructure (GNWT-INF)
Subject:	Water Licence Amendment Application Preliminary Screening – On-site sewage lagoon and groundwater well

Decision from the Wek'èezhìi Land and Water Board Meeting of June 18, 2020

1.0 Decision

The Wek'èezhìi Land and Water Board (WLWB or the Board) met on June 18, 2020 and considered a Water Licence Amendment Application (the Amendment Application) from the Government of the Northwest Territories Department of Infrastructure (GNWT-INF) for the Tłı̄chq All-Season Road (TASR or the Project). The Amendment Application included the proposed construction and operation of a Sewage Disposal Facility (sewage lagoon) and a groundwater well to support camp operations at site. The Board conducted a preliminary screening of this Amendment Application according to subsection 124(1) of the *Mackenzie Valley Resource Management Act* (MVRMA) based on the application package and the public record for the proceeding. Based on the evidence provided, it is the Board's view that the proposed on-site sewage lagoon and water well will not have a significant adverse impact on the environment or be a cause for public concern as set out in paragraph 125(1)(a) of the MVRMA. Therefore, the Board has decided to **not to refer** the Project to Environmental Assessment.

In accordance with subsection 125(1.1) of the MVRMA, the Board shall not issue a licence, permit, or other authorization for the development before the end of 10 days after the day on which the Review Board received the report of the determination. If no referral to environmental assessment is received by June 28, 2020, the Board will continue the Water Licensing process.

2.0 Background

The TASR Project is a 97 km-long dual-lane gravel highway running from KM 196 on Highway 3 near Behchokq, to Whatì, consisting of a 60 metre (m) right-of-way and 16 water crossings that require culverts or bridges. In addition to the Construction, operation, and maintenance of the road and Water crossings, this project also requires the operation of camps. The Main Camp is located at km 19 of the TASR and houses up to 170 workers. The TASR project has already undergone Environmental Assessment.¹ On May 30, 2019, a subsequent preliminary screening was conducted² and the Board issued a Type A Land Use Permit W2016E0004³ and Type B Water Licence W2016L8-0001^{4,5}

In August 2019, GNWT-INF submitted a revised Version 1.1 of the Waste Management Plan.⁶ The Waste Management Plan stated that:

...sewage waste generated from camp facilities and onsite portable washrooms will be hauled to Behchokq for the initial months of construction and then managed on site with a sewage lagoon constructed near the camp site. The design, location and operational details of the sewage lagoon will be in accordance with the written authorization of the Inspector.

In review of Version 1.1, the Board noted that although the May 30, 2019 Preliminary Screening Form did contemplate on-site sewage treatment at the main camps, this method of waste disposal was a contingency option, not the primary method. As such, the Board did not include conditions in the Licence or Permit regarding the construction or operation of a sewage lagoon when it issued the Permit and Licence in May 2019. On August 23, 2019, when the Board approved Version 1.1 of the Waste Management Plan, it did *not* approve on-site sewage treatment (i.e., sewage lagoon) as the primary option for waste disposal for main camps and expected GNWT-INF to submit a Water Licence amendment to ensure “the appropriate public review took place and any necessary conditions would be included in the Water Licence.”⁷ GNWT-INF committed to submitting a Water Licence Amendment in early September 2019.⁸ Currently, as described and authorized in their approved Waste Management Plan (Version 1.2), GNWT-INF is approved to dispose of sewage waste at the sewage lagoon for the City of Yellowknife until June 1, 2020 .

¹ See Mackenzie Valley Environmental Impact Review Board Public Registry for the [TASR Report of the Environmental Assessment and Reasons for Decision](#).

² See WLWB Online Registry (www.wlwb.ca) for [W2016E0004 – TASR – Preliminary Screening – May 30 19](#)

³ See WLWB Online Registry for [W2016E0004 – TASR – Land Use Permit – May 30 19](#)

⁴ See WLWB Online Registry for [W2016L8-0001 – TASR – Water Licence – May 30 19](#)

⁵ See WLWB Online Registry for [W2016L8-0001 – TASR – Land Use Permit and Water Licence Applications – Reasons for Decision – May 30 19](#)

⁶ See WLWB Online Registry for [W2016L8-0001 – TASR – Waste Management Plan – Version 1.1 – Aug 12 19](#)

⁷ See WLWB Online Registry for [W2016E0004 – TASR – Management Plans – Reasons for Decision – Aug 23 19](#)

⁸ See WLWB Online Registry for [W2016L8-0001 – TASR – Letter from GNWT-INF Confirming Forthcoming WL Amendment – Aug 21 19](#)

On March 3, 2020, GNWT-INF submitted a complete application to amend its Type B Water Licence.⁹ The amendment application included a completed application form, a summary of engagement conducted, and a preliminary design report prepared by TetraTech for the sewage lagoon.

Both the proposed groundwater well and the sewage lagoon are to be located near the main camp at km 19 of the TASR. GNWT-INF proposes to construct the sewage lagoon approximately 300 metres (m) away from the camp, and the groundwater well will be constructed right next to the camp.¹⁰ The TetraTech design report states that the sewage lagoon system is 75 m x 75 m (top of cell) and designed to dispose of sewage generated at the camp for over a 2-year period in a single cell with sufficient freeboard. It is expected that for six months of the year, sewage will be exfiltrating and it is assumed that during the remaining six months, wastewater will be stored due to winter freeze conditions.

To assist the Board in completing a Preliminary Screening of this Amendment Application, the Board distributed the Amendment Application for public review on March 4, 2020, inviting Parties to provide comments and recommendations (e.g., on impacts and mitigation measures) using the Online Review System (ORS).¹¹ A notice of an amendment application was also distributed.¹² Comments were due April 1, 2020 with responses due April 15, 2020. On March 11, 2020, the Item for Review was updated to include a draft Water Licence for public review.¹³ In addition to GNWT-INF's proposed amendments, the draft Water Licence included amendments to several other sections of the Water Licence to reflect previous Board decision/directives, recent legal advice, new standard wording for Water Licences, and to address administrative errors.

Comments were received by the Government of the Northwest Territories Department of Environment and Natural Resources (GNWT-ENR), North Slave Metis Alliance (NSMA), Tłıchq Government (TG), and Wek'èzhii Renewable Resources Board (WRRB); however, only GNWT-ENR and NSMA provided recommendations. Board staff also provided questions with the assistance of Arktis Solutions Inc (Arktis). GNWT-INF submitted responses by the deadline on April 15, 2020. Parties' comments and recommendations and the Licensee's responses are available on the WLWB Online registry.¹⁴

No concerns with the timelines were raised during the public review and no requests to extend reviewer comment deadline were received; thus, 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 and subsection 43(1) of the *Waters Act*. The Board is also satisfied that the Tłıchq Government has been consulted in accordance with section 63 of the MVRMA.

⁹ See WLWB Online Registry for [W2016L8-0001 – TASR – Type B Amendment Application – Mar 3 20](#)

¹⁰ See WLWB Online Registry for [W2016L8-0001 – TASR – Amendment – Information Request Response – Jun 10 20](#)

¹¹ See WLWB Online Review System (ORS) for http://lwbors.yk.com/LWB_IMS/ReviewComment.aspx?appid=12904

¹² See WLWB Online Registry for [W2016L8-0001 – TASR – Amendment – Notice of Amendment Application – Mar 11 20](#)

¹³ [W2016L8-0001 – TASR – Type B Amendment – DRAFT Water Licence – Mar 10 20](#)

¹⁴ See WLWB Online Registry for [W2016L8-0001 – TASR – Amendment – Review Summary and Attachments – Apr 15 20](#)

The Board notes that the GNWT-ENR's comments were submitted after the reviewer comment deadline; however, GNWT-ENR's comments explained that it was satisfied with GNWT-INF's proposal to mitigate impacts on NWT-listed or pre-listed species or its habitat.

As mentioned above, Board staff retained Arktis to assist in reviewing the amendment application. One of the main components of the Preliminary Design Report is a site investigation to confirm surface and subsurface conditions under and around the proposed cell location. This investigation was to take place in March; however, with the on-going COVID-19 pandemic, was delayed. As a result of the delays, GNWT-INF recommended the information from the site investigation be submitted at a later date prior to construction. Based on the response received from GNWT-INF, it was determined that additional information was required. An Information Request (IR) was sent to GNWT-INF on April 17, 2020 requesting GNWT-INF conduct a desktop plume delineation exercise and analysis.¹⁵ Updates were provided by NSI in response to the IR on April 17, 2020 and April 27, 2020 proposing alternative options for the Board to consider via email. Board staff communicated the following on April 29, 2020:¹⁶

In the April 17, 2020 email, Board staff had requested GNWT-INF/NSI to submit "...[a] single and formal response that addresses all of the elements of the Information Request." Unfortunately, the email of April 27, 2020 fails to address that request. It is clear that the information is not currently available and therefore the Board will not be considering this at its May 6th meeting.

As of May 13, 2020, a response to the IR had not yet been received. Options available to GNWT-INF were discussed at the May 13, 2020 check-in conference call with GNWT-INF. On May 21, 2020, Board staff received an email from GNWT-INF indicating that it "would like to move forward with the application as-is and based on the information provided to date"; GNWT-INF submitted its formal IR Response on June 10, 2020.¹⁷ The response to the IR indicated that GNWT-INF's contractor, NSI, would "not invest any additional time/effort until after the lagoon is approved and then NSI may proceed with site investigation and generate requested info." A map with both the proposed locations of the lagoon and groundwater well was provided in the IR response.

3.0 Reasons for Decision

3.1 Preliminary Screening

The Board completed a preliminary screening of the Amendment Application in accordance with subsection 124(1) of the MVRMA. The preliminary screening identifies potential impacts and mitigations for the proposed activities. In accordance with subsection 125 of the MVRMA, the Board must conduct a preliminary screening of the Amendment Application to determine whether the project might have a significant adverse impact on the environment or might be a cause for public concern.¹⁸

¹⁵ See WLWB Online Registry for [W2016L8-0001 – TASR – Amendment – Information Request – Apr 17 20](#)

¹⁶ See WLWB Online Registry for [W2016L8-0001 - TASR - Amendment - Information Request - Correspondence - Apr 29 20](#)

¹⁷ See WLWB Online Registry for [W2016L8-0001 – TASR – Amendment – Information Request Response – Jun 10 20](#)

¹⁸ See the Mackenzie Valley Environmental Impact Review Board (www.reviewboard.ca) for the [Environmental Impact Assessment Guidelines](#), 2004.

In section 10 of the Amendment Application, GNWT-INF outlined the potential effects of the proposed water well and lagoon, and proposed measures GNWT-INF would take to mitigate the potential impacts. The Board has also conducted its own analysis of potential impacts and proposed mitigations of the Amendment Application and combined it with GNWT-INF’s proposed concerns and mitigations in Table 1 below:

Table 1: Summary of Potential Impacts of the proposed Amendment Application and proposed Mitigations

Potential Impact	Activity	Proposed Mitigations <i>Description of measures that can be applied to reduce potential impact, including consideration of cumulative impacts and climate change.</i>
Alteration of wildlife habitat (or use of)	Clearing of vegetation; Noise (e.g., use of heavy equipment, blasting, crushing drilling); Human presence; Construction of new infrastructure	<ul style="list-style-type: none"> • Concerns: <ul style="list-style-type: none"> ○ Wildlife habitat may be impacted by work needed to construct the sewage lagoon/Sewage Disposal Facility. ○ No additional concerns were received during the public review related to this potential impact. • Mitigations: <ul style="list-style-type: none"> ○ The Licence requires GNWT-INF to comply with the Wildlife Management and Monitoring Plan (WMMP) once approved (Part B, Condition 18 of the Licence). The currently approved WMMP is Version 3.4 and includes mitigations for both direct and indirect habitat loss or alteration. GNWT-INF has also proposed to amend the Wildlife Management and Monitoring Plan to include the installation of remote cameras to monitor wildlife presence or use near the lagoon, and efficacy of fencing as part of weekly monitoring protocols (as per section 10 of the Application). • Board Analysis and Determination: <ul style="list-style-type: none"> ○ Based on the mitigations described above and the lack of concerns raised by Parties, the Board does not believe the proposed activities within the Amendment Application will have a significant adverse impact on the environment or be a cause for public concern.
Loss, direct injury, and/or mortality of wildlife	Onsite disposal of wastes	<ul style="list-style-type: none"> • Concerns: <ul style="list-style-type: none"> ○ Wildlife may be attracted to sewage lagoon during operation, potentially resulting in lethal human-wildlife conflicts ○ No additional concerns were received during the public review related to this potential impact. The Board notes that during the public review, GNWT-ENR expressed satisfaction that the likelihood of impacts to NWT-listed or pre-listed species can be avoided or minimized if the proponent applies the wildlife mitigation and monitoring measure outlined in the existing WMMP as well as the revisions to the WMMP that GNWT-INF has committed to making. • Mitigations: <ul style="list-style-type: none"> ○ In section 10 of its Application, GNWT-INF proposed the following: <ul style="list-style-type: none"> ▪ Install and maintain snow fencing around perimeter of the lagoon to exclude wildlife ▪ Amend the Wildlife Management and Monitoring Plan to include the installation of remote cameras to monitor wildlife presence or use near the lagoon, and efficacy of fencing as part of weekly monitoring protocols. ▪ If monitoring shows wildlife are accessing the lagoon despite fencing, implement adaptive management principles and adjust the fencing to exclusion. ▪ If wildlife mortality is observed at the lagoon, it will be reported to the WLWB within 48 hours. ○ The Licence requires GNWT-INF to comply with the Wildlife Management and Monitoring Plan once approved (Part B, Condition 18 of the Licence). The currently approved WMMP is Version 3.4 and includes mitigation for direct wildlife mortality during construction and operation. GNWT-INF has also proposed to amend the Wildlife Management and Monitoring Plan to include the installation of remote cameras to monitor wildlife

		<p>presence or use near the lagoon, and efficacy of fencing as part of weekly monitoring protocols (as per section 10 of the Application).</p> <ul style="list-style-type: none"> • Board Analysis and Determination: <ul style="list-style-type: none"> ○ Based on the mitigations described above and the lack of concerns raised by Parties, the Board does not believe the proposed activities within the Amendment Application will have a significant adverse impact on the environment or be a cause for public concern.
Contamination	Disposal of wastes in the surrounding environment	<ul style="list-style-type: none"> • Concerns: <ul style="list-style-type: none"> ○ Construction and operation of the sewage lagoon could contaminate groundwater and proximate surface waterbodies ○ Sewage lagoon exceeds predicted capacity and contaminates local soils and groundwater during operation ○ Wastewater contamination at decommissioning of local soils and groundwater ○ Contamination of soils and waterbodies may have subsequent impacts to water quality, human health, wildlife, fish, and their habitat. ○ No additional concerns were received during the public review related to this potential impact outside from Board Staff. • Mitigations: <ul style="list-style-type: none"> ○ In section 10 of its Application, GNWT-INF proposed the following: <ul style="list-style-type: none"> ▪ Design and siting considerations will follow the recommendations from the Tetra Tech Design Report, including: implementing erosion and sediment controls, slope stabilization; locating facility a minimum of 100 m from any surface waterbody; and installing a tank for emergency storage (64m³) ▪ It will conduct a geotechnical investigation to confirm design assumptions regarding infiltration rates and other parameters ▪ Follow best management practices as detailed in the approved Construction Plan ▪ Monitor and record sewage levels ▪ Conduct daily visual monitoring and inspections of lift station pumps and piping ▪ Conduct daily visual monitoring and inspections of the stability of the sloped walls of the disposal cell ▪ Implement applicable management plans: Waste Management Plan and Water Monitoring Plan ▪ Conduct scheduled inspections and maintenance of wildlife exclusion fencing. ○ During the public review, GNWT-INF committed to validating and/or offered to provide the following: <ul style="list-style-type: none"> ▪ Values and assumptions of the design (See response to Board staff comment 4); ▪ Inferred movement of wastewater (see response to Board staff comment 5 and 11); ▪ Thickness levels of sandy and soil layers (see response to Board staff comment 5); ▪ Total volume of wastewater that will be in the lagoon, elevation of the wastewater from the base of the lagoon, and the freeboard level after 6 months of wastewater storage (see response to Board staff comment 6); ▪ Geotechnical stability analysis (see response to Board staff comment 8); ▪ Effective hydraulic conductivity to achieve desired infiltration rate (see response to Board staff comment 9); ▪ Vertical and horizontal setback distances that would prevent contamination (see response to Board staff comment 10); and ▪ Lagoon-specific Inspection and Test Plan and a quality control and inspection checklist (see response to Board staff comment 23) ○ During the public review, GNWT-INF committed to re-evaluating and modifying design of the lagoon based on the site investigation (See response to Board staff comment 3) ○ During the public review, GNWT-INF committed to removing any excess or surplus wastewater from lagoon off-site if emergency storage is not enough (see response to Board staff comment 16).

		<ul style="list-style-type: none"> ○ In its application, GNWT-INF proposed to pump remaining wastewater out to vegetation, stabilize the remaining sludge, and backfill the cell during decommissioning. During the public review, GNWT-INF has instead committed to pumping and removing off-site any excess or surplus wastewater from the lagoon (See response to Board staff comment 17). ○ Based on GNWT-INF's responses to reviewer comments, the Board believes that additional conditions can be added to Licence W2016L8-0001 to address any remaining concerns and uncertainty related to potential impacts of waste contamination. <ul style="list-style-type: none"> • Board Analysis and Determination: <ul style="list-style-type: none"> ○ Based on the mitigations described above and the lack of concerns raised by Parties, the Board does not believe the proposed activities within the Amendment Application will have a significant adverse impact on the environment or be a cause for public concern.
Reduction, loss or alteration of water	Withdrawal of water from a watercourse or waterbody	<ul style="list-style-type: none"> • Concerns: <ul style="list-style-type: none"> ○ Volume of water drawn could deplete groundwater level and surface water recharge ○ No additional concerns were received during the public review related to this potential impact. • Mitigations: <ul style="list-style-type: none"> ○ In section 10 of its Application, GNWT-INF proposed the following: <ul style="list-style-type: none"> ▪ The water well's intake pump will be equipped with a water meter ▪ Daily water use (33m³) is anticipated to be below estimated daily well capacity (100 m³) ▪ Water meter readings will be recorded daily by Camp Manager to ensure that maximum permissible threshold of 299 m³/day is not exceeded. ○ The Licence requires GNWT-INF to maintain water use limits within the 299 m³/day. These values are reported both in the weekly environmental report and are required by the Annual Report. • Board Analysis and Determination: <ul style="list-style-type: none"> ○ Based on the mitigations described above and the lack of concerns raised by Parties, the Board does not believe the proposed activities within the Amendment Application will have a significant adverse impact on the environment or be a cause for public concern.
Introduction of deleterious substances	Deposit of waste into a watercourse	<ul style="list-style-type: none"> • Concerns: See Concerns for Potential Impact 'Contamination' • Mitigations: See Mitigations for Potential Impact 'Contamination' • Board Analysis and Determination: See Board Analysis and Determination for Potential Impact 'Contamination'
Social, cultural, and economic well-being	Use of heavy equipment; construction of access roads or trails	<ul style="list-style-type: none"> • Concerns: <ul style="list-style-type: none"> ○ Construction of Sewage lagoon 300 m away from camp increases the disturbance footprint and may have impacts to potential archaeological sites or to people who may use the area. ○ No additional concerns were received during the public review related to this potential impact. • Mitigations: <ul style="list-style-type: none"> ○ No comments were received during the public review regarding the impact the proposed sewage lagoon may have on other licensees, water users, or the public. ○ GNWT-INF's responses to Board staff comment #20 states that an AOA/AIA has already been completed for Pit 13C, where the proposed lagoon will be located. However, according to the map provided with GNWT-INF's IR response from June 10, 2020, the lagoon is located outside the Pit 13C boundaries. The Board notes that no comments were received by the Prince of Wales Northern Heritage Centre during the public review and Condition 65 of the accompanying TASR Permit requires GNWT-INF to consult with the Prince of Wales Northern Heritage Centre prior to any new land disturbance to identify if an Archaeological Impact of the Assessment of the sites. • Board Analysis and Determination: <ul style="list-style-type: none"> ○ Based on the mitigations described above and the lack of concerns raised by Parties, the Board does not believe these activities associated with the proposed Amendment Application will have a significant adverse impact on the environment or be a cause for public concern.

3.1.2 Summary of Potential Environmental Impacts

The Board considered whether the proposed lagoon and groundwater well might have a significant adverse impact on the environment. Mitigation measures for potential impacts are identified in Table 1 above. These mitigation measures include existing Water Licence conditions, as well as activities and commitments made by GNWT-INF in the Application package, its responses to public review comments, and as part of its IR response. Where necessary, the Board believes that new conditions can be included in an amended Water Licence to address any remaining concerns and uncertainty with respect to mitigating potential impacts.

3.1.3 Public Concern

The Board must also consider whether a proposed development might be a cause of public concern. Although public concern may be less clearly defined than the questions related to significant adverse environmental impacts, it is the Board's responsibility to evaluate public concern as a potential trigger for an Environmental Assessment.

The Board notes that no reviewers voiced public concern in review of the application. In addition, in reviewing the comments provided during the public review, the Board did not identify any comments or issues that indicate a possible cause for public concern.

3.1.4 Overall Preliminary Screening Determination

The Board has reviewed all the evidence received from GNWT-INF and reviewers with respect to the Preliminary Screening of the proposed on-site lagoon and groundwater well. Based on the information provided by GNWT-INF in the Application package, the public review, and the IR response; the ability to address any remaining concerns and uncertainty with respect to mitigating potential impacts with the inclusion of conditions in an amended Water Licence; the lack of public concern raised during the review process; and the absence of comments indicating that this Amendment Application should be referred to the Review Board, it is the Board's view that the proposed on-site sewage lagoon and water well will not have a significant adverse impact on the environment or be a cause of public concern.

Signed the 18th Day of June, 2020, on behalf of the Wek'èezhìi Land and Water Board



Witness



Joseph Mackenzie
Chair, Wek'èezhìi Land and Water Board