

Land and Water Boards of the Mackenzie Valley



APPLICATION FOR LICENCE, AMENDMENT OF LICENCE, OR RENEWAL OF LICENCE IN NON-FEDERAL AREAS

Subsection 5(1) and Schedule C of the [Waters Regulations](#)

| | | | | |
|--|--|--|--------------------------------|----------|
| Use an "X" to indicate which Board the Application is being made to: | Mackenzie Valley Land and Water Board: | | Sahtu Land and Water Board: | |
| | Wek'èezhìi Land and Water Board: | | Gwich'in Land and Water Board: | X |

To complete this form, please refer to the LWB [Guide to the Water Licensing Process](#) (Guide) and fill in the grey fields; attach additional pages, as necessary. Indicate N/A in the grey fields for Items or parts of Items that are not applicable. An application package checklist is provided in the Guide. Review the following LWB guidance for formatting your Application Package:

- [Document Submission Standards](#)
- [Standard Outline for Management Plans](#)

| | | | |
|--|------------------|--|----------|
| If applicable, provide the existing or current Water Licence number: | | | |
| Use an "X" to indicate if this Application is accompanied by another Application for a Water Licence in a federal area and/or a Land Use Permit. | Water Licence: | | |
| | Land Use Permit: | | X |

1. NAME AND CONTACT INFORMATION – APPLICANT

| | | | |
|-------------------|---|------------|--------------------------|
| Project Name: | Dempster Highway Culvert Replacement – KM 147.0 | | |
| Applicant's Name: | Mahabub Rahman | | |
| Position: | Senior Project Officer | | |
| Company Name: | Government of Northwest Territories | | |
| Mailing Address: | 5051 49th Street | | |
| Community: | Yellowknife | Telephone: | 867-767-9086 ext. 31150 |
| Prov/Terr: | Northwest Territories | Email: | Mahabub_Rahman@gov.nt.ca |
| Postal Code: | X1A 2L9 | Other: | |

2. NAME AND CONTACT INFORMATION – APPLICANT’S HEAD OFFICE

Include a Certificate of Corporate Registration from the Government of the Northwest Territories in your Application Package.

| | | | |
|--|--|------------|--|
| Use an “X” to indicate this information is the same as Item 1 above: | | X | |
| Name: | | | |
| Position: | | | |
| Company Name: | | | |
| Mailing Address: | | | |
| Community: | | Telephone: | |
| Prov/Terr: | | Email: | |
| Postal Code: | | Other: | |

3. LOCATION OF PROJECT

Use the grey fields below to provide or reference the following information:

Traditional Place Name:

Maps and Geographic Information System (GIS) Data: Include a map in your Application Package, identifying local geographic features, watercourses and water sources, project structures, and location(s) of any proposed waste deposits. Provide geographic coordinates (latitude and longitude) of project features, and the maximum and minimum project boundary in degrees, minutes, seconds, or decimal degrees. Include GIS data in your Application Package, if applicable. Refer to the LWB [Geospatial Data Submission Standards](#) for providing geographic information.

| | | | |
|--------------------|-------------|--------------------|-------------|
| Minimum latitude: | 67.483761 | Maximum latitude: | 67.483664 |
| Minimum longitude: | -133.769359 | Maximum longitude: | -133.765394 |

NTS Map Sheet No.: Provide the map sheet number:

GIS Data: Use an “X” to indicate if GIS data is attached.

| | | | |
|-----------|----------|----------------|--|
| Attached: | X | Not Available: | |
|-----------|----------|----------------|--|

Land Types: Use an “X” to indicate the type(s) of land on which the activities are proposed:

| | | | | | | | |
|------------------------|----------|---------------------------------------|----------|---------------|--|-----------------|--|
| Free Hold/ Private: | X | Commissioner’s/ Territorial Lands: | X | Federal Land: | | Municipal Land: | |
|------------------------|----------|---------------------------------------|----------|---------------|--|-----------------|--|

4. DESCRIPTION OF PROJECT

Describe the proposed activities in the grey field provided below and contact Board staff to determine whether additional information will be required. For proposed amendments to authorized activities, specify: the nature of the amendment, the condition(s) to be amended, and the rationale for the amendment.

| |
|---|
| <p>See attached Design Memo for a detailed breakdown of the Project activities.</p> <p>The Government of the Northwest Territories Department of Infrastructure (GNWT-INF) aims to upgrade a culvert on Dempster Highway near Tsiigehtchic (Gwich’in area settlement) on an unnamed creek located</p> |
|---|

at (UTM 8W) 552691E 7485848N. The GWNT-INF has flagged the culvert as being structurally compromised. 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.

Water for the Project will be withdrawn from the Mackenzie River. A maximum of 105 m³ of water will be withdrawn for the Project.

As described in Section 6 of the Design Memo, the Project will be completed in the following phases:

Phase I – Dam Removal

- Prior to culvert installation, the beaver dam on the outlet side of the culvert must be removed. The dam will be removed implementing the procedure presented in the DFO Interim Code of Practice: Beaver Dam Removal

Phase II – Site Preparation

- Access to the tunnelling area on the upstream and downstream sides of the culvert will be constructed as per the drawing package. The site will be graded level to allow for safe maneuvering of equipment.

Phase III – Installation

- Installation will be completed using a Tunnel Boring Machine (TBM), or an equivalent Excavator Boring Shield Machine (EBS).

Phase IV – Grouting

- The annular space between the tunnel wall and the new culvert pipe will need to be grouted to mitigate short term settlement and ensure the culvert is restrained in place for its lifecycle. Grout samples should be collected so they can be tested after the full cure cycle has been completed to verify the strength.

Phase V – Final Reclamation

Site reclamation will commence once the trenchless installations and grouting activities are complete. Final grade and contouring shall be completed as per the design drawing to ensure the inlet area channels water directly into the culverts.

5. TYPE OF UNDERTAKING

Refer to Schedule B of the [Waters Regulations](#). Use an “X” to indicate which one type of undertaking applies:

| | | | |
|---|--------------------|----------|--|
| 1 | Industrial | | |
| 2 | Mining and milling | | |
| 3 | Municipal | | |
| 4 | Power | | |
| 5 | Agriculture | | |
| 6 | Conservation | | |
| 7 | Recreation | | |
| 8 | Miscellaneous | X | (describe): Watercourse training – culvert replacement |

6. WATER LICENSING CRITERIA

Refer to Schedules D to H of the [Waters Regulations](#). Use an “X” to indicate which criteria apply:

| | Type B | Type A | |
|--|--------|--------|-------------|
| To obtain water | X | | |
| To cross a watercourse | X | | |
| To modify the bed or bank of a watercourse | X | | |
| Flood control | | | |
| To divert water | X | | |
| To alter the flow of, or store, water | X | | |
| To deposit waste | | | |
| Other | | | (describe): |

7. PROPOSED QUANTITY OF WATER INVOLVED

Describe the purpose of each proposed water use, name, and type (e.g., lake, river) of the water source, the location, and the quantity of water that would be used in the grey fields below. Add more rows as needed.

| Purpose of Water Use | Name and Type of Water Source | Location | Geographic Coordinates | | Proposed Water Use Volume/Rate, including units |
|----------------------|-------------------------------|--------------|------------------------|--------------|---|
| | | | Latitude | Longitude | |
| Grout mixing | Mackenzie River | Tsiigehtchic | 67.455903° | -133.756386° | 95 |
| Civil works | Mackenzie River | Tsiigehtchic | 67.455903° | -133.756386° | 10 |

For each water source identified in the table above, provide a comparison of total proposed water use to the available capacity. Add more rows as needed. For more information about determining winter water source capacity, refer to the LWB/GNWT [Method for Determining Winter Water Source Capacity for Small-Scale Projects](#).

| Water Source | Capacity of Water Source, including units | Other Users of the Water Source | Comparison of Total Proposed Water Use to Available Capacity |
|-----------------|---|---------------------------------|--|
| Mackenzie River | See attached monthly discharge data | Municipal | Negligible |

8. PROPOSED WASTE MANAGEMENT METHODS

Use the grey field below to provide or reference the following information:

Waste Management Plan: Include a Waste Management Plan in your Application Package, if applicable, or for small-scale activities, describe proposed waste management activities in the grey field provided below. A template for the Plan is available in the LWB [Guidelines for Developing a Waste Management Plan](#).

If waste is proposed to be disposed of off-site within the NWT, written confirmation (e.g., an email, letter, etc.) from the facility/facilities indicating they will accept the waste is required. Include it/these in your

Application Package. Please note this information will be required by the Board prior to commencement of activities.

Municipalities: Complete the relevant Operations and Maintenance Plans using the available [Templates](#) and include them in your Application Package. Refer to Sections 4-8 of Environment and Climate Change Canada’s [Solid Waste Management for Northern and Remote Communities: Planning and Technical Guidance Document](#).

EQC and AEMP: For activities that involve the deposit of waste into water, provide proposed effluent quality criteria (EQC) in accordance with the LWB [Waste and Wastewater Management Policy](#) and [Standard Process for Setting EQC](#). Refer to the LWB/GNWT [Guidelines for Effluent Mixing Zones](#) when mixing zones are being considered. Refer to the LWB/GNWT [Guidelines for Aquatic Effects Monitoring Programs](#) for more information regarding the development of AEMP programs.

Waste management plan: GNWT-INF will utilize the Waste Management Plan previously developed by GNWT-INF for associated permit G21E001.

Municipalities: Sewage disposal facilities, solid waste disposal facilities, and water treatment plans not applicable.

EQC: No anticipated effluent from the project. AEMP potentially required as sedimentation may occur during isolation installation and removal. Turbidity will be monitored at this time. Fish salvage potentially required

9. EXISTING WATER USERS AFFECTED BY THIS PROJECT

Describe pre-Application engagement efforts with any existing water users and associated possible claims for water compensation or compensation agreements. Include the names and locations of existing water users (e.g., persons or organizations) in the grey fields below. An additional table should be added for each water user.

| | |
|--------------------------------|-----|
| Name: | N/A |
| Community: | N/A |
| Province/Territory: | N/A |
| Describe Engagement Completed: | N/A |

10. POTENTIAL ENVIRONMENTAL IMPACTS OF THE PROJECT AND PROPOSED MITIGATIONS

If the proposed project, or parts of the proposed project, may be exempt from preliminary screening, describe the rationale for the exemption in the grey field below. Include the date of the most recent screening, and/or the environmental assessment or impact review number.

See attached Watercourse Crossing Environmental Protection Plan (WCEPP) and table below for further environmental impacts and their proposed mitigation measures.

Unless the project could be exempt from preliminary screening, using the Impact-Mitigation Table below, or the more detailed Table in Appendix F of the [Guide](#), identify all potential impacts and possible mitigations

that are relevant to the proposed project, and indicate whether any of the mitigation measures have been developed as a result of input from affected parties. Applicants for type A water licences must use the detailed Table in the Guide; other applicants may choose either the Table below or the Table in the Guide. Possible potential impacts are listed below; however, these lists are not exhaustive and may not apply to all projects. All information provided should reflect the size, scale, and nature of the proposed project. Cumulative impacts and climate change must be considered. Attach additional pages if needed. Use landscape orientation if preferred.

| Potential Impacts <i>Use an "X" to indicate which apply</i> | X | Potential Project Impacts and Proposed Mitigations <i>Describe the potential impact(s) and the proposed measure(s) to reduce each of these impacts.</i> |
|---|----------|---|
| ABIOTIC COMPONENTS | | |
| Land | | |
| Soil contamination | X | Soil contamination could occur during culvert replacement through leaks or spills of equipment. Please refer to spill contingency plan (Section 5, WCEPP) for mitigation measures |
| Soil compaction | | N/A |
| Destabilization/erosion | X | 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. |
| Change in soil structure | | N/A |
| Inability to support vegetation | | N/A |
| Other | | N/A |
| Water | | |
| Groundwater | | |
| Water table alteration | | N/A |
| Infiltration changes | | N/A |
| Changes in water quality | | N/A |
| Temperature changes | | N/A |
| Other | | N/A |
| Permafrost | | |
| Loss or change in extent | | N/A |
| Changes in seasonal fluctuations | | N/A |
| Change in persistence | | N/A |
| Other | | N/A |
| Surface Water | | |
| Water flow or level changes (permanent, temporary, seasonal) | X | 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 |

| Potential Impacts <i>Use an "X" to indicate which apply</i> | X | Potential Project Impacts and Proposed Mitigations <i>Describe the potential impact(s) and the proposed measure(s) to reduce each of these impacts.</i> |
|---|----------|---|
| | | 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, into a settling basin, and reintroduced into the downstream flow at an equal or better quality than extracted baseline values. |
| Drainage pattern changes | | N/A |
| Temperature changes | | N/A |
| Changes in water quality | X | 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. |
| Wetland impairment | | N/A |
| Changes to aquatic habitat (see Biotic section below) | X | A beaver dam will be removed. Hoses will be strung through the existing culvert to a discharge location downstream of the beaver dam. It is here where downstream sedimentation from discharge energy will be mitigated. In addition, dams will be installed at the inlet side of the culvert, and pump around operations will be initiated. The team will ensure pump capacity is equal to the volume of water traveling through the watercourse, plus contingency pumps and hoses for high water events. The beaver dam will be removed according to the procedure presented by Fisheries and Oceans Canada in the interim Code of Practice for Beaver Dam Removal. |
| Other | | N/A |
| Air | | |
| Changes in air quality | | N/A |
| Harm to living things | | N/A |
| Increased greenhouse gases | | N/A |
| Other | | N/A |
| BIOTIC COMPONENTS | | |
| Vegetation | | |
| Direct loss of vegetation | X | There is a potential for loss of vegetation due to the construction process along the stream bank. 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. |

| Potential Impacts <i>Use an "X" to indicate which apply</i> | X | Potential Project Impacts and Proposed Mitigations <i>Describe the potential impact(s) and the proposed measure(s) to reduce each of these impacts.</i> |
|---|----------|---|
| Loss of Species at Risk or may-be-at-risk plants | | N/A |
| Change in species composition | | N/A |
| Introduction of non-native (invasive) species | X | 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 |
| Effects on plant health (dust, metals, toxins) | | |
| Increased risk of fire | X | There is potential for fire caused by equipment. Fire suppression kits will be onsite during times of increased fire risk (i.e., wildfire season). All vehicles will contain a fire extinguisher, and personnel will be competent in recognizing fire risks and use of fire extinguishers. |
| Compaction of vegetation | X | 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. |
| Other | | N/A |
| Terrestrial Wildlife Habitat | | |
| Direct loss or removal of habitat, dens, or nests | X | Not anticipated during culvert replacement as the highway is pre-disturbed. If there is the potential of loss or removal, appropriate regulatory authorities (ex. ENR, DFO, ECCC) will be contacted and mitigation measures approved prior to any work taking place. |
| Loss or removal of keystone species and/or Species at Risk habitat | | N/A |
| Fragmentation of wildlife corridor | | N/A |
| Direct injury or mortality | X | 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). |
| Disturbances to key lifecycle stages: breeding, feeding, | | N/A |

| Potential Impacts <i>Use an "X" to indicate which apply</i> | X | Potential Project Impacts and Proposed Mitigations <i>Describe the potential impact(s) and the proposed measure(s) to reduce each of these impacts.</i> |
|---|----------|---|
| nesting, staging | | |
| Effects on population abundance | | N/A |
| Change in species diversity | | N/A |
| Effects on wildlife health (toxins, metals, etc.) | X | Spills could occur during culvert replacement through leaks or spills of equipment. Please refer to spill contingency plan (Section 5, WCEPP) for mitigation measures |
| Changes to migratory movement patterns | | N/A |
| Changes to predator-prey relationships | | N/A |
| Human-wildlife conflicts | X | Potential for wildlife collisions along highway and potential conflicts during culvert replacement. Should wildlife collisions or occurrences occur, appropriate regulatory authorities will be contacted (ex. ENR, ECCC). A wildlife monitor will be onsite at all times to ensure human-wildlife conflicts are mitigated. Personnel will not approach, harass, or feed wildlife. Personnel will not attempt to move wildlife away from site. |
| Other | | N/A |
| Aquatic Habitat | | |
| Breeding disturbances | X | 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. Spawning habitat for fish species which require gravel substrate for spawning was rated as poor immediately upstream and downstream of the culvert due to a lack of gravel substrate. Fines and instream vegetation present in the beaver dam pool downstream of the culvert may be suitable for northern pike spawning, or other species that prefer dense vegetation |
| Change in species diversity | | N/A |
| Effects on health (toxins, metals, sediment, etc.) | X | 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. |
| Changes to migratory movement patterns | | N/A |
| Changes to predator-prey relationships | | N/A |
| Effects on population abundance | | N/A |
| Change in species diversity | | N/A |
| Other | | N/A |

| Potential Impacts <i>Use an "X" to indicate which apply</i> | X | Potential Project Impacts and Proposed Mitigations <i>Describe the potential impact(s) and the proposed measure(s) to reduce each of these impacts.</i> |
|--|----------|---|
| CULTURAL COMPONENTS | | |
| Wildlife Harvesting | | |
| Loss or reduction in game species populations | X | During construction, there is potential to cause harm and/or loss to fish species. The construction of the Project will be conducted as per best management practices to reduce harm and/or loss, as well as follow the advice presented in the Letter of Advice received from Fisheries and Oceans Canada. |
| Effects on traditional land use, subsistence, and harvesting rights | X | The site will not be accessible for exercising traditional land use, subsistence, or harvesting rights while construction is underway. Following completion of construction, the site will be re-opened for access and all traditional land uses may resume. |
| Other | | N/A |
| Cultural Integrity and Heritage Resources | | |
| Change to or loss of cultural integrity | | N/A |
| Change to or loss of traditional lifestyle | | N/A |
| Change to or loss of heritage resource | | N/A |
| Other | | N/A |
| Social and Economic Well-being | | |
| Increased human health hazard and risk | | N/A |
| Economic opportunities or losses (employment, training) | | N/A |
| Change in ecological, cultural, social, or economic values identified for protection in approved Land Use Plans | | N/A |
| Impairment of the recreational or traditional uses of the land or water | X | Temporary impairment of the recreational or traditional uses of land or water will occur during construction. Public access will be restricted during operations because of public safety concerns due to the nature of the work. Following construction, the Project area will be re-opened for full use and access by the general public. |
| Impairment of the aesthetic quality of the land or water | X | Temporary impairment of the aesthetic quality of the land or water will occur as construction is occurring. Once construction is complete, the aesthetic quality of land and water will mimic pre-construction conditions. |
| Changes to the use of the area by other non-Indigenous people (e.g., trappers, outfitters, residents, hunters, forest harvesters, other authorized projects) | X | The Project area will not be accessible to the general public during construction due to safety concerns. Following construction, the Project area will be re-opened for full use and access by the general public |
| Other | | N/A |

Spill Contingency Plan: Include a Spill Contingency Plan in your Application Package, if applicable, or for small-scale activities, provide relevant details in the grey field provided below. An example of this Plan can be found in the INAC [Guidelines for Spill Contingency Planning](#).

See attached WCEPP for the Spill Contingency Plan (Section 5).

11. NAME AND CONTACT INFORMATION – CONTRACTORS AND SUB-CONTRACTORS

Include relevant names, responsibilities, and contact information in the grey fields below. An additional table should be added for each contractor and sub-contractor.

| | | | |
|-------------------|-------------------------------|------------|------------------------------|
| Name: | Kyle Sherwin | | |
| Responsibilities: | Regulatory submission/support | | |
| Company Name: | CCI Inc. | | |
| Mailing Address: | 9-214 Grande Blvd W | | |
| Community: | Cochrane | Telephone: | 587-227-9475 |
| Prov/Terr: | Alberta | Email: | Kyle.sherwin@ccisolutions.ca |
| Postal Code: | T4C 2G4 | Other: | |

Use an “X” to indicate that contractor and/or subcontractor information is not available at this time.

12. STUDIES UNDERTAKEN TO DATE

In the grey field below list any relevant studies that support the proposed activities and include them in your Application Package.

Dempster Highway KM 147 Creek Hydrotechnical Assessment – Stantec (2019) (attached)
 Fish Habitat Assessment for Crossing Structure Replacement: NWT Highway 8 (Dempster Highway) at KM 147.0 – Stantec (2019) (attached)
 Bridge Inspection Form – Government of Northwest Territories (2019) (attached)
 Dempster Highway Culvert Replacement Project Design Memo – KM 147.0 – CCI Inc. 2022 (attached)

13. PROPOSED PROJECT SCHEDULE AND TERM

Indicate the proposed project start and completion dates, and the time of year the project activities are planned to occur. Describe any anticipated temporary closure(s) or seasonal shutdowns. Indicate the term requested.

| | | | |
|--|---------------|------------------|-------------------|
| Start Date: | July 13, 2024 | Completion Date: | December 31, 2025 |
| Clearing for the Project is anticipated to commence on July 13, 2024. Once clearing is complete, construction will commence immediately, followed by reclamation. Clean up of the site is expected to be complete by October 27, 2024. If construction cannot occur in 2024 due to supply chain delays, construction will occur in 2025. | | | |
| Term of Licence Requested: | 2 years | | |

14. ADDITIONAL SUPPORTING INFORMATION

Use the grey field below to provide or reference the following information:

Engagement: Conduct engagement, prepare an Engagement Record and Engagement Plan in accordance with the LWB [Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits](#), and include them in your Application Package. Templates are provided in the Guidelines. Please also refer to [Information for Proponents on MVLWB's Engagement Requirements](#).

Eligibility: Contact Indigenous, federal, and territorial governments, and other parties to ensure all appropriate authorizations have been obtained or are in the process of being obtained. Obtain permission from the landowner(s), if necessary (e.g., obtain and reference licences of occupation, leases, access authorizations, etc.) and attach it/them to the Application.

Land Use Plans: Contact the applicable Land Use Planning Board or the Tłı̨ch̨ Government for assistance in interpreting the requirements of the relevant Land Use Plan(s). Include a Land Use Plan Conformity Table, or if applicable, written confirmation of conformity from the Tłı̨ch̨ Government, in your Application Package, demonstrating how the project meets the requirements of the Land Use Plan, if applicable.

Traditional Knowledge (TK): Provision of TK is mandatory for Applications to the Sahtu Land and Water Board. Other applicants are strongly encouraged to include TK.

Facilities: Include the supporting information required under subsection 5(2) of the [Waters Regulations](#) if the project includes the following: dam(s); storage reservoir(s); watercourse crossing(s); camp(s) or lodge(s); use of water for industrial use or mining and milling; deposit of waste; or handling or storage of petroleum products or hazardous materials.

Closure and Reclamation: Include a Closure and Reclamation Plan in your Application Package, or for small-scale activities, describe the proposed closure and reclamation activities in the grey field provided below. Describe any temporary closure(s) and seasonal shutdowns. Refer to the LWB/AANDC [Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories](#) and Environment and Climate Change Canada's [Solid Waste Management for Northern and Remote Communities: Planning and Technical Guidance Document](#).

Closure Cost Estimate: Prepare a Closure Cost Estimate and include it in your Application Package. Applicants are encouraged to contact Board staff, prior to applying, to determine which closure-cost- estimate template is most suited to the project activities being applied for. Guidance is provided in sections 1.3 and 2.1 of the LWB/GNWT/CIRNAC [Guidelines for Closure and Reclamation Cost Estimates for Mines](#). If your Application is submitted concurrently with a Land Use Permit Application, the estimate should include a breakdown of water- and land-related activities and liabilities.

Financial Capacity: Provide information relating to your financial capacity, as outlined in paragraph 26(5)(d) of the [Waters Act](#). Please note this information will be required by the Board prior to issuance.

Engagement: Please refer to GNWT-INF Engagement Plan for permit G21E001.

Eligibility: GNWT permission obtained. Letter of Advice from Fisheries and Oceans Canada obtained (attached)

Land Use Plans: The Project is located within the Dempster Highway: Transportation Special Management Zone (Dempster Highway: Mackenzie River to Inuvik). As the Project will be constructed in support of highway maintenance of the Dempster Highway, the condition to protect tourism value is exempted. Activities should demonstrate that there will be no adverse effects on raptor nesting sites from the beginning of March to the end of August. Raptor nesting sites should be avoided by a minimum of 250 metre (89).

Tsiigehtshik: Mouth of the Arctic Red River Special Management Zone: Fish, heritage resources, falcons and raptors.

Facilities: Plan of the crossing with cross-sections and elevations, description of existing bed and banks has been attached (2567 -DFO_Drawing_Package_KM147-B). Available data on water flow can be found in the attached Hydrotechnical analysis (Appendix D).

Closure and Reclamation: Please see reclamation plans in the attached WCEPP (Section 4.4.3) and Design Memo (Section 6.5).

15. FEES

Refer to the Guide for assistance with determining applicable fees.


| Type of Fee | Amount (\$) |
|----------------------------------|-------------|
| Application fee (if applicable): | \$ |
| Water use fee deposit: | \$ |
| Total Fees: | \$ |

If fees are submitted separately, indicate how and when they will be delivered to the Board's office.

| |
|--|
| |
|--|

16. SIGNATURE

| | |
|--|-----------------------------|
| Kyle Sherwin (CCI Inc.) on behalf of GNWT-INF | VP – Environmental Services |
| Applicant's Name (print) or Company Name | Position (print) |

| | | |
|---|--|---------------|
|  | | June 13, 2024 |
| Signature | | Date |

Review the application package checklist provided in the Guide, and submit completed applications to the Regulatory Manager or Executive Director identified on the “Contact Us” pages of the respective Land and Water Board (www.mvlwb.com, www.wlwb.ca, www.slwb.com, www.glwb.com).