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 NUNAVUT WATER BOARD  
 NUNAVUT IMALIRIYIN KATIMAYIT  
 OFFICE DES EAUX DU NUNAVUT

**APPLICATION FOR APPROVAL FOR THE USE OF WATER OR DEPOSIT OF WASTE WITHOUT A LICENCE**

Refer to the Guide to the Approval for the Use of Water or Deposit of Waste Without a Licence (Guide) in completing this Application.

<b>APPLICATION NO:</b> (for NWB use only)		
<b>1. APPLICANT CONTACT INFORMATION</b> (name, address) Michelle Blade Unit 210, 4104 Road to Nowhere Iqaluit, Nunavut X0A2H0  Phone: 867-333-0903 Fax: not applicable e-mail: michelle.blade@mail.mcgill.ca	<b>2. APPLICANT REPRESENTATIVE CONTACT INFORMATION</b> if different from Block 1 (name, address) Same as Block 1  Phone: _____ Fax: _____ e-mail: _____ (Attach authorization letter)	
<b>3. NAME OF THE OWNER OF THE LAND THAT WILL BE USED IN RELATION TO THE WATER TO BE USED OR THE WASTE TO BE DEPOSITED</b>  Crown, Inuit Owned Land (Kivalliq), Municipal (Arviat, Rankin Inlet)		
<b>4. NAME OF PROJECT</b> (consistent with the name of the project issued by other regulatory agencies) Assessing changing cryohydrogeologic conditions with locally-relevant landscape indicators in Nunavut, Canada		
<b>5. LOCATION OF UNDERTAKING</b>  Project Extents (decimal degree format)		
NW	<u>68.677747°N</u>	<u>101.882878°W</u>
NE	<u>64.039997°N</u>	<u>66.074769°W</u>
SE	<u>59.956328°N</u>	<u>68.166253°W</u>
SW	<u>60.001119°N</u>	<u>102.001856°W</u>

**Camp Location(s) (decimal degree format)**

Not applicable.

**Name of the Water Management Area in which the Undertaking is located.** (Please see Appendix D of the Guide):

11 – Maguse, 13 – Wilson, 16 - Hudson Bay Islands, 53 - Frobisher Bay

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**6. Previous Approvals or Licences Associated with Undertaking** (“Type A”, “Type B” or Approval Without a Licence)

X NA or

Previous Licence/Approval Number: \_\_\_\_\_

*The Board reminds the Applicant that as stated in s. 46 of the NWNSRTA, the expiry or cancellation of any previous licence does not relieve the holder from any outstanding obligations imposed under the licence.*

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**7. CLASSIFICATION OF UNDERTAKING** - Indicate the classification of undertaking by checking one of the following boxes.

<input type="checkbox"/> Industrial	<input type="checkbox"/> Agricultural
<input type="checkbox"/> Mining	<input type="checkbox"/> Recreational
<input type="checkbox"/> Conservation	<input type="checkbox"/> Power
<input type="checkbox"/> Municipal	X Other: Research Project

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See Appendix C of the Guide for descriptions of classifications of undertakings.

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**8. DESCRIPTION OF UNDERTAKING AND EQUIPMENT USED** – Provide a brief description of the undertaking including a description of any equipment that will be used in using water or depositing waste.

This research project pairs Inuit *Qaujimajatuqangit* with permafrost and groundwater science to identify and assess locally-relevant landscape indicators of winter groundwater movement along overland travel routes. Winter overland travel by Nunavut community members primarily consists of snowmobiling and dog sledding. Encountering overflow water is a locally-relevant winter overland travel hazard. Known overflow areas, as identified by local community members, have been selected to collect field measurements during the Winter of 2025/2026 and if need be the Winter of 2026/2027. Water samples (less than 4L) are collected from the overflow water and nearby lake(s) twice a year in the Fall and Spring and analyzed for dissolved minerals. Trail cameras are set up on 4ft wooden stakes to take daily photos of the overflow water area and resulting icing formation. Small sensors (8.5x1 inch or smaller) are installed in the overflow water and nearby lake(s) to record daily water temperature, electrical conductivity, and water level. Environmental impacts are negligible. Research personnel stay in accommodations in each community and do day trips to the field data collection locations in the Fall and Spring traveling by snowmobile, ATV, or truck utilizing the community’s overland travel routes. No fuel drums/containers nor supply caches will be established on the land at anytime. No waste will be deposited. All trail cameras, wooden stakes, and sensors will be removed at the end of the research project. Combined, these results improve understanding of why these winter overflow areas are already occurring where they are - and enhance predictions for local decision makers of where additional winter overflow areas may begin occurring and become future hazards along winter overland travel routes as a result of climate change. Currently, Arctic climate change prediction models rarely account for near-surface groundwater processes nor its effects on locally-relevant landscape processes such as winter overland travel hazards.

**9. SCHEDULE** – Applicants are advised that approvals without a licence are issued for a one year term.

Proposed Start Date: 29/10/2025  
(Day/Month/Year)

Proposed Completion Date: 29/10/2026  
(Day/Month/Year)

**10. TYPE OF USE OF WATER WITHOUT A LICENCE PROPOSED** - Check the box that applies to the type of water use proposed. If none of the water uses listed below applies to the proposed water use, an application for a water licence will be required. See the NWB's Guide 4 – Completing and Submitting a Water Licence Application for a New Licence.

For an undertaking other than a Power undertaking and for a use of water related to the construction of a structure across a watercourse that is less than 5 metres wide at the ordinary high water mark at the point of construction.

For an undertaking other than a Power undertaking and for a use of water related to the training of an intermittent watercourse.

For an undertaking other than a Power undertaking and for a use of water related to the training of a watercourse that is less than 5 metres wide at the ordinary high water mark at the point of training.

For an undertaking other than a Power undertaking and for a use of water related to the training of a watercourse that involves the infilling of the watercourse, if the watercourse has no inflow or outflow and a surface area of less than 0.5 hectares.

For an undertaking other than a Power undertaking and for a use of water related to the training of a watercourse that involves removal or placement of less than 100 m<sup>3</sup> of material.

For an undertaking other than a Power undertaking and for a use of water related to the construction of a temporary structure in a watercourse for the purpose of flood control.

For an undertaking other than a Power undertaking and for any use of water related to the storage of 2,500 m<sup>3</sup> or less.

For an undertaking other than a Power undertaking and for any use of water less than 50 m<sup>3</sup> per day.

**11. QUANTITY AND QUALITY OF WATER INVOLVED** - For each type of water use indicated in Block 10, provide the source of water, the estimated quantity to be used in cubic metres per day, and the periods during which water will be extracted.

Type of Water Use indicated in Block 10	Name of water source	Estimated quantity of water to be used in cubic	Periods during which water will be extracted
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		metres per day	
Use of water less than 50 m <sup>3</sup> per day	A total of 12 unnamed lakes and 10 overflow areas near Arviat, Whale Cove, Rankin Inlet, Coral Harbour, Iqaluit (see map)	0.0003 m <sup>3</sup> per day	Fall (October – December, 2025) Spring (April – June, 2026)

**12. TYPE OF DEPOSIT OF WASTE PROPOSED** - Check the box that applies to the type of deposit of waste proposed. If none of the deposits of waste listed below apply to the proposed deposit of waste, an application for a water licence will be required. See the NWB's Guide 4 – Completing and Submitting a Water Licence Application for a New Licence.

- For an Industrial undertaking, for an activity related to hydrostatic testing or cleaning of storage tanks and pipelines, and for any deposit of waste resulting from hydrostatic testing or cleaning of unused storage tanks or pipelines.
- For an Industrial undertaking, for an activity related to quarrying and gravel washing, and for any deposit of waste that is not deposited to surface water and that results from quarrying or gravel washing above the ordinary high water mark.
- For a Mining undertaking, for an activity related to exploratory work, any deposit of sewage to a sump.
- For a Power undertaking, any deposit of sewage to a sump.
- For an Agricultural undertaking, any deposit of sewage to a sump.
- For a Conservation undertaking, any deposit of sewage to a sump.
- For a Recreation undertaking, any deposit of sewage to a sump.
- For any Other type of undertaking not listed above, other than Municipal, any deposit of sewage to a sump.

**13. QUANTITY AND QUALITY OF WASTE INVOLVED** – For each type of waste indicated in Block 12, describe the quantity in cubic metres/day, measures to avoid or mitigate adverse impacts, and periods of deposition.

Type of Waste indicated in Block 12	Quantity to be deposited in cubic metres per day	Measures to avoid or mitigate any adverse impacts	Periods during which waste will be deposited
Not applicable. No waste will be deposited.			

**14. SIGNATURE**

I, Michelle Blade, certify that the information given on this form is, to the best of my knowledge, correct and complete.

X Yes  No

I certify that the Nunavut Planning Commission's land use planning requirements under Article 11 of the Nunavut Land Claims Agreement have been met.

X Yes  No

I certify that the Nunavut Impact Review Board's development impact review requirements under Article 12 of the NLCA have been met.

X Yes  No

I certify that the proposed water use is of a type set out in column 2 of Schedule 2 of the Regulations that is further specified by column 3, in respect of an undertaking set out in column 1. See list in Block 10.

X Yes  NA  No

I certify that the proposed deposit of waste is an activity that is set out and then further specified in columns 2 and 3 of Schedule 3 of the Regulations, in respect of an undertaking that is set out in column 1 of Schedule 3. See list in Block 12.

Yes X NA  No

I certify that the proposed water use or deposit of waste will not substantially affect the quality, quantity or flow of the watercourse whose waters are used.

X Yes  No

I certify that the proposed water use or deposit of waste will not substantially affect the quality, quantity or flow of waters flowing through Inuit Owned Lands.

X Yes  No

I certify that the proposed water use or deposit of waste will not affect the use of waters by a person who would be entitled to compensation under sections 58 or 60 of the Nunavut Waters Nunavut Surface Rights Tribunal Act (Act) if their use of these waters were to be adversely affected by an applicant for a licence.

X Yes  No

I certify that a licence is not required for another use of water, or deposit of waste in respect of the proposed undertaking.

X Yes  No

I have read and agree to comply with the following conditions outlined in sections 4(3), 5(4), 5(5) and 6 of the Nunavut Waters Regulations:

1. In the case of an applicant who has a mineral right and who intends to use waters or deposit waste in relation to that right, the applicant shall respect the priority conferred on Inuit by section 62 of the Act as if that applicant had a licence for the use or deposit.

2. Measures must be taken prior to using water to minimize any alteration to the bed or banks of a watercourse whose waters are to be used, and the measures shall be maintained during the operation of the undertaking.
3. No waste is to be deposited to surface water or within 31 metres of the ordinary high water mark of any body of water.
4. The waste shall not contain more than 15 milligrams per litre of petroleum or petroleum product and must not have a visible hydrocarbon sheen.
5. Prior to the closure or abandonment of the undertaking or end of the period authorized for the use of water or deposit of waste without a licence, whichever occurs first, the site shall be restored — to the extent practicable — to the state in which it was before the water was used or the waste was deposited.<sup>a</sup>
6. An applicant who is authorized under the Regulations to use waters or deposit waste without a licence shall:
  - a. maintain accurate and detailed books and records of:
    - i. the quantity of water, in cubic metres, used each day,
    - ii. the quantity, in cubic metres, of waste deposited each day,
    - iii. the type of waste deposited each day,
    - iv. where the waste is deposited,
    - v. the concentration of the substance, or substances, in the deposited solid or liquid that has the effect of making the deposit waste,
    - vi. the methodology used to calculate or determine the information referred to in items (i) to (iv), and
    - vii. the measures that were taken to avoid or mitigate any adverse impacts of the deposit of waste.
  - b. keep the books and records on the site of the undertaking during the period of its operation and make them available during that period to an inspector on request;
  - c. submit to the Board a report containing a summary description and supporting photographs of the restoration of the site of the undertaking within 30 days after the earliest of (i) the day on which the undertaking is closed or abandoned, and (ii) the last day of the period authorized for the use or deposit without a licence;<sup>b</sup> and
  - d. keep the books and records for two years after submitting the report describing the restoration of the site of the undertaking.

Notes:

a) A site need not be restored prior to the end of the period authorized for the water use or deposit of waste without a licence, as required by Item 5, if the Board issues a licence for the use of water or deposit of waste on that site prior to the end of that period.

b) An applicant need not submit the report referred to in Item 6 (c), to the Board if the applicant obtains the Board's approval for a use of water or deposit of waste without a licence, or a licence for a use of water or deposit of waste, on the same site within thirty (30) days after the last day of the period authorized for the use or deposit.

X Yes  No

I understand that any approval granted by the Board for the use of water or deposit of waste without a licence will be authorized for a period of one year after the day on which the Board approves the Application. The use or deposit is not authorized until the Board approves the Application and it is only valid as long as the applicant is in compliance with the conditions set out in the declaration above.

X Yes  No

I understand that if I have answered "No" to any of the above statements a water licence is required from the Nunavut Water Board prior to the use of water or deposit of waste.

X Yes  No

<b>Michelle Blade</b>	<b>PhD Candidate</b>		<b>24/10/2025</b>
<b>Name (Print)</b>	<b>Title (Print)</b>	<b>Signature</b>	<b>Date</b>