

Camp Location(s) (decimal degree format)69.379, -81.79468.763, -81.225

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

Kingora Watershed

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

☒ 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.

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

- ☐ Industrial
☐ Mining
☐ Conservation
☐ Municipal

- ☐ Agricultural
☐ Recreational
☐ Power
☒ Other: (describe)

_____ Scientific Research _____

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

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.

Water will be collected in 1L containers by hand from a non-motorized zodiac

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

Proposed Start Date: 02/06/2018
 (Day/Month/Year)

Proposed Completion Date: 01/06/2019
 (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 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 m³ 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 m³ or less.
- ☒ For an undertaking other than a Power undertaking and for any use of water less than 50 m³ 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 metres per day	Periods during which water will be extracted
Science	Mostly not named See map.	< 0.5 m ³	Bi-Weekly

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.

NO WASTE.

- ☐ 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
N/A			

14. SIGNATURE

I, Andrew Moleiros (print name), certify that the information given on this form is, to the best of my knowledge, correct and complete.

☒ Yes

☐ No

OR

I, _____ (print name), as an authorized representative of the Applicant, _____, certify that the information given on this form is, to the best of my knowledge, correct and complete.

☒ 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.

☒ Yes☐ No

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

☒ 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.

☒ 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☒ 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.

☒ 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.

☒ 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.

☒ 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.

☒ 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.^a
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;^b 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.

✓ 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.

✓ 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.

✓ Yes

☐ No

Andrew Makero

Name (Print)

Assistant professor

Title (Print)



Signature

May 20, 2018

Date

Principle Investigator:

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Water Resource Assessment: Igloolik and Hall Beach, Nunavut

Sustainable clean sources of water are a critical aspect of northern community development and planning, yet northern regions may face looming water crises due to growth, development, and environmental change that put pressure on a limited existing supply. Arctic regions are particularly vulnerable to shifts in seasonality that would impact the summer recharge of reservoirs, from both decreased precipitation and increased evaporative stress. As many northern communities are also rapidly growing with increased industry and development, water resource assessments are critical tools which provide municipalities with the data requisite for water management strategies. However, many northern communities in Canada lack baseline knowledge of their own existing water supply, baseline demand, or recharge potential. Here, we examine communities with current and looming water crises due to limited supply and increased demand. Using available climactic, hydrologic, and consumption data to forecast municipal water supply over a 20-year planning period for Hall Beach, and Igloolik, we will generate local climate forecasts that are applied to municipal demand schedules to evaluate the vulnerability of each municipal water supply. We will also examine alternative sources of water within the scope of each community, by engaging with the community directly to: 1) identify current sources of the water which the community relies on (both municipal and non-municipal source waters), 2) examine alternative sources of water, 3) conduct household surveys to project future water needs based on current and projected use. Each source of water identified will have a suite of water quality parameters measured, including water chemistry, benthic invertebrate assemblage composition, and sediment chemistry. We will not be sampling fish.

The first primary task of this proposal is to directly engage with both Igloolik and Hall Beach to understand the current and future water needs, preferences, and concerns over their water supply. Community engagement meetings will occur in early June, 2018, depending on the timing of local community activities. During our initial community engagement, we will discuss current and future water needs with specific households and stakeholders. We will also identify other potential sources of

water, and engage with community members to determine if knowledge of alternative water sources already exists.

From this basis, we will then complete a water resource assessment for Hall Beach and Igloolik in the summer of 2018. In order to complete a water resource assessment for Igloolik and Hall Beach, a bathymetric survey is required. This will consist of using a depth sounder launched from a portable inflatable boat on lakes identified as current or potential water supply sources for Hall Beach and Igloolik. A small water sample (< 1L) will be collected from each source. Subsequently, a small amount of sediment from the mid-basin of each lake will be collected (< 1 kg) with the use of a gravity coring tube. Each water source will also have the benthic assemblages assessed to determine the level of productivity in the water source. Benthic invertebrate communities are sampled with a 500um mesh net deployed in the littoral area of each lake for 5 minutes. We will not be sampling artificial reservoirs in either community.

The research team (consisting of 4 individuals whom will travel between Hall Beach and Igloolik) will travel to each community as soon as possible after the community engagement process (early summer, 2018) in order to conduct the bathymetric surveys and attain the pertinent data regarding water infrastructure, pumping and distribution methods, hydrologic and geologic data of the watershed, and importantly acquire details regarding the collection and nature of the climate and demand data. Water quality samples will be collected at each site during this time. Water and sediment samples collected are small (< 1L for water collection, < 1kg for sediment collection) and collected by hand by inflatable boat. Once this fieldwork is complete, the research team will apply the modeling protocols already developed to produce the 20-year water supply forecasts for each community.

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መግቢያ ለሮኒ ልዩ ስልጠና ሪፖርት: ልዩ ስልጠና አገልግሎት

ከላይ የተገለጹት ስልጠናዎች ለሮኒ ልዩ ስልጠና ሪፖርት ስለሚደረግበት ወቅት ለሚከተሉት ምክንያቶች ስልጠናዎችን ማድረግ አለብዎት፡

- 1) ስልጠናዎችን ማድረግ ለሚከተሉት ምክንያቶች አለብዎት፡
- 2) ስልጠናዎችን ማድረግ ለሚከተሉት ምክንያቶች አለብዎት፡
- 3) ስልጠናዎችን ማድረግ ለሚከተሉት ምክንያቶች አለብዎት፡

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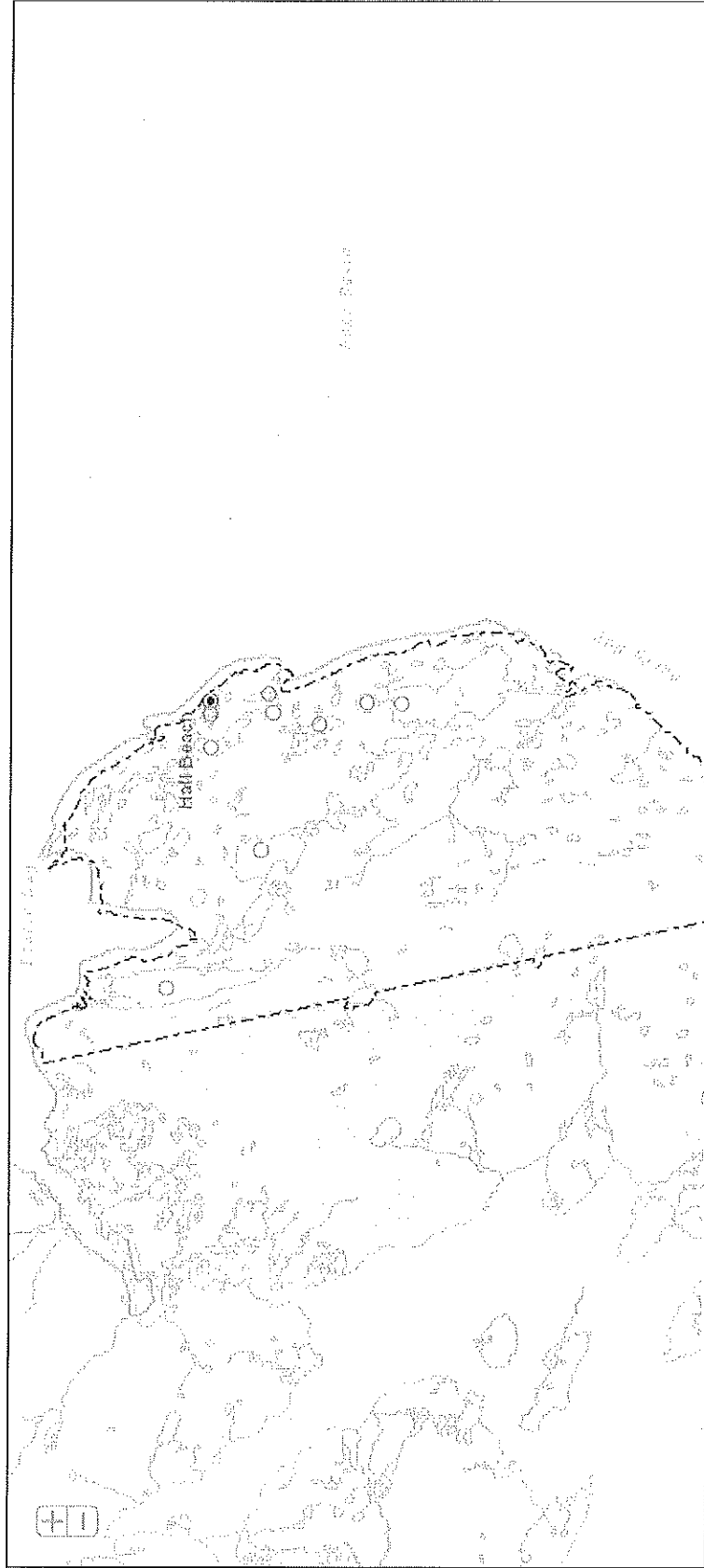
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[18YN022] Nunavut Water Resource Assessment: Igloodik and Hall Beach, Nunavut (125326)
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Applicant: Trent University

Project Type: Scientific Research

Region:

Last Modified: 2018-05-02

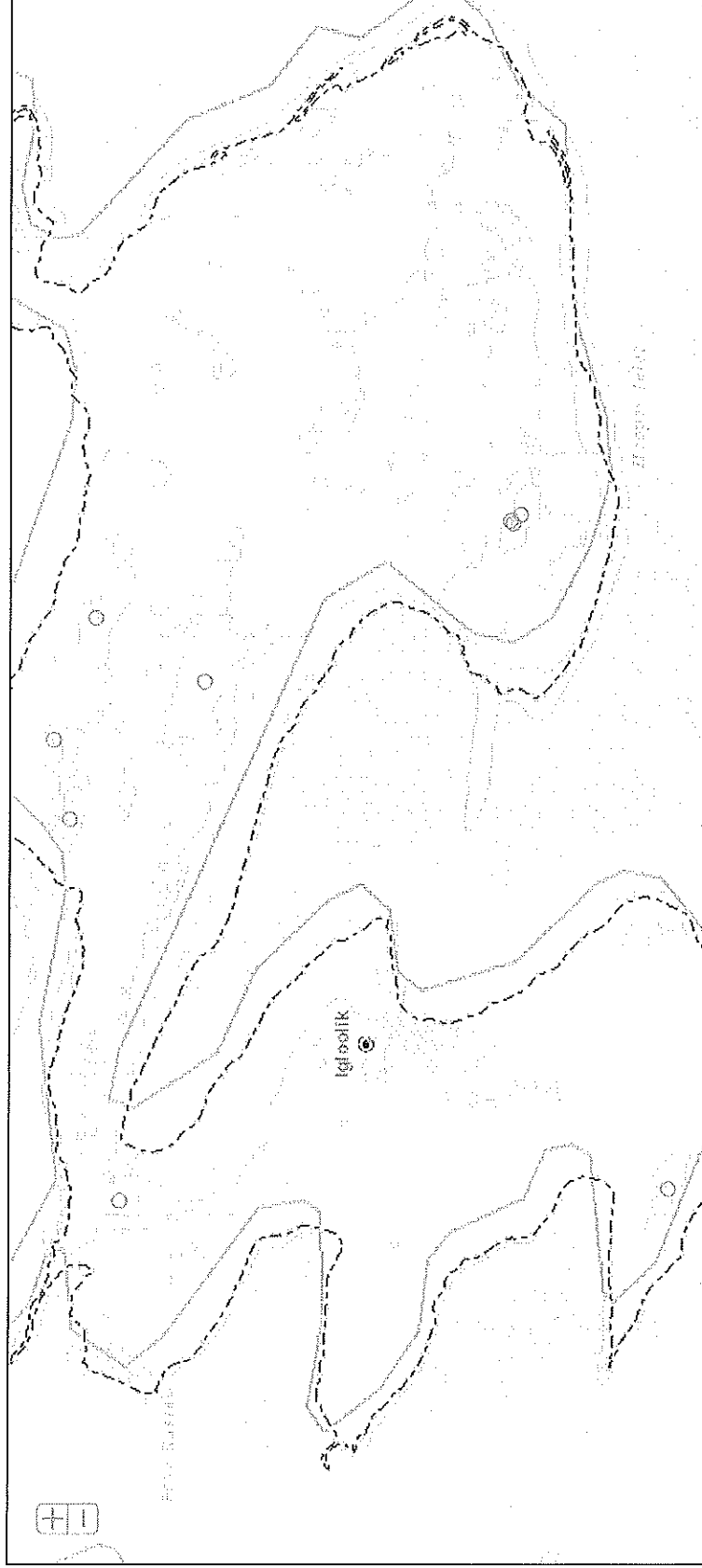
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COMPLETED SCREENING

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