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kNK5 wmoEp5 vtmp5 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 <u>Guide to the Approval for the Use of Water or Deposit of Waste Without a Licence</u> (Guide) in completing this Application.

APPLICATION NO: (for NWB use only)				
1. APPLICANT CONTACT INFORMATION (name, address)		APPLICANT REPRESENTATIVE CONTACT INFORMATION if different from Block 1 (name, address)		
Andrew Medeiros	-	, , ,		
Trent University Biology	***************************************			
1600 West Bank Dr	D			
Peterborough, Ontario, K9L0G2	Pnone: Fax:			
Phone: : (416)736-5499	e-mail:	10.00		
Fax:	(Attach	authorization letter)		
e-mail: andrewmedeiros@trentu.ca	(* ************************************			
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 Crown Land 4. NAME OF PROJECT (consistent with the name of the project issued by other regulatory)				
agencies)	, and b	5,000.000.00		
Characterizing the ecology of aquatic systems in the Iqa	aluit area			
5. LOCATION OF UNDERTAKING				
Project Extents (decimal degree format)				
NW 63,819, -68.634				
NE 63.823, -68.437				
SE 63.728, -68.354				
SW 63.746, -68.546				

NUNAVUT WATER BOARD March 2015

Camp l	Location(s) (decimal degree format)			
	63.751, -68.515			
the Gui	of the Water Management Area in which the Undertaking is located. (Please see Appendix D of ide): sher Bay 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 ☐ Agricultural ☐ Mining ☐ Recreational ☐ Conservation ☐ Power ☐ Municipal ✓ 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 v	will be collected in 1L containers by hand from a non-motorized zodiak			
9.	SCHEDULE – Applicants are advised that approvals without a licence are issued for a one year term.			
	Proposed Start Date: _02/06/2018 Proposed Completion Date:01/06/2019 (Day/Month/Year) (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 <u>Guide 4</u> — <u>Completing and Submitting a Water Licence Application for a New Licence</u> .			
	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 ³ 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 the storage of 2,		dertaking and for any use of	water related to
\boxtimes	For an undertak 50 m³ per day.	ing other than a Power un	dertaking and for any use of	water less than
	Block 10, provide t		/OLVED - For each type of vertimated quantity to be used be extracted.	
	f Water Use ted 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	3	Mostly not named See map.	< 0.5 m3	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 <u>Guide 4 – Completing and Submitting a Water Licence Application for a New Licence</u> .				
	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.			

NUNAVUT WATER BOARD March 2015

	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.			
I		the quantity in cubic metro	OLVED – For each type of es/day, measures to avoid o	
	e of Waste ted 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. 9	SIGNATURE	1		
I,given on	this form is, to the	e best of my knowledge, co	(print name), ce prrect and complete.	rtify that the information
	Yes □ No			
			OR	
l,	atativo of the An-!	oant	(print name), as	
informat	ntative of the Appli ion given on this fo	orm is, to the best of my kr	nowledge, correct and comp	, certify that the lete.

	✓ Yes		□No
I certify that the Nunavut Planning Co Nunavut Land Claims Agreement hav		use planning requ	irements under Article 11 of the
	✓ Yes		□No
I certify that the Nunavut Impact Revi of the NLCA have been met.	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 if further specified by column 3, in resp			
	✓ Yes	□NA	□No
I certify that the proposed deposit of 2 and 3 of Schedule 3 of the Regulati 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 of flow of waters flowing through Inuit O		e will not substant	ially affect the quality, quantity or
	✓ 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 <u>Nunavut Waters Nunavut Surface Rights</u> <u>Tribunal Act</u> (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 undertaking.	for another use of	water, or deposit	of waste in respect of the proposed
	✓ Yes		□No
I have read and agree to comply with the <u>Nunavut Waters Regulations</u> :	the following con	ditions outlined in	sections 4(3), 5(4), 5(5) and 6 of
			ers or deposit waste in relation to that right, as if that applicant had a licence for the use
Measures must be taken prior to usi are to be used, and the measures sl			d or banks of a watercourse whose waters a undertaking.

NUNAVUT WATER BOARD March 2015

3.	No waste is to be deposited to sur	ace water or within 3	1 metres of the ordina	ry high water ma	ark of any	y body of water.
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- 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,
 - 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.
 - 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:

Name (Print

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.

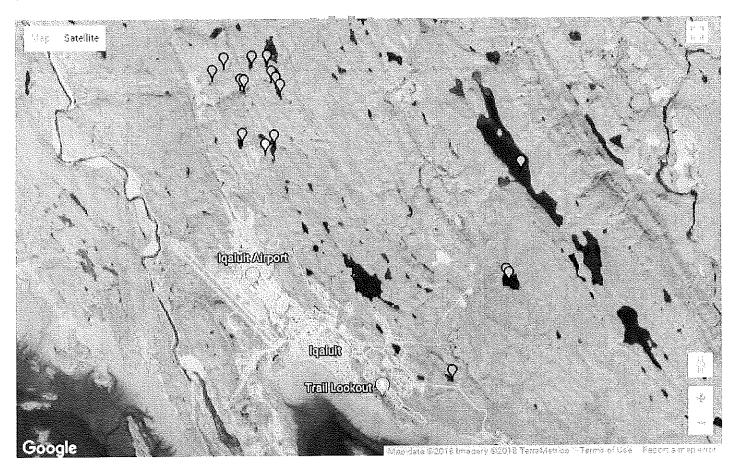
b) An applicant need not submit the report referred to in Item 6 (c), to the Board if the applicant obtains the Board's approval for a use of water or deposit of waste without a licence, or a licence for a use of water or deposit of waste, on the same site within thirty (30) days after the last day of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

Date

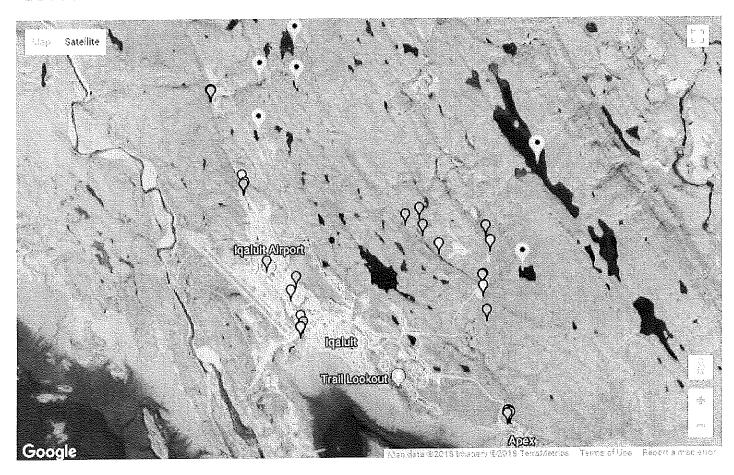
Market Market Control of Control		
	✓ Yes	□No
I understand that any approval grante licence will be authorized for a period The use or deposit is not authorized the applicant is in compliance with the	of one year after the day on which until the Board approves the Applic	the Board approves the Application. ation and it is only valid as long as
	✓ Yes	□No
I understand that if I have answered " Nunavut Water Board prior to the us		s a water licence is required from the
	✓ Yes	□No
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Lakes



Streams



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Characterizing the ecology of aquatic systems in the Iqaluit area

Summary of Research for 2018

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The Canadian Arctic contains a vast multitude of lakes and ponds which have served as important sources of food and freshwater for indigenous peoples and which continue to yield valuable scientific information about environmental conditions. Ecosystem structure and functioning in Arctic aquatic systems is expected to change under the influence of human-induced climate change and other human impacts. However, much remains unknown about the *current* composition of these communities. The object of this research is to assess the biological and limnological characteristics of Arctic lakes and streams in Nunavut, Canada.

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Researchers have increasingly examined the spatial structuring of freshwater systems. The majority of this research has focused on temperate rivers and lakes, leaving Arctic regions under-researched. In the Canadian Arctic landscape, aquatic ecosystems feature prominently. As interest in Arctic resources and recognition of the Arctic's sensitivity to climate change increase, it is essential to assess our northern freshwater resources.

 $$^{6} P^{1} A^{6} \cap ^{6} G^{6} P^{6} A^{6} \cap ^{6} G^{6} \cap ^{6} A^{6} \cap ^{6} A^{6}$

During the summer of 2018, we propose to sample many lake and stream systems in Iqaluit, Nunavut. We hope our research in the area will provide valuable new information on recent changes in water flow, water chemistry and status of aquatic insect

populations. We will collect water quality data and aquatic insect samples during June 1-August 31, 2018. We will remove a small sample of water (~1 L) from each sampling site, as well as a small volume of mud (~ several cm3) for analysis of indicators of environmental change.

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We will stay in Iqaluit and access Airport Creek and Apex River by ATV or truck. We do not collect any fish, nor construct any structures to collect specimens, nor disturb any wildlife. No sampling will take place within areas of cultural importance or protected status. Data collected will be analyzed by students at Trent University, and will be published both in graduate student theses and peer-reviewed science journals. If the opportunity arises, we anticipate communicating our research efforts and results via media such as CBC Radio North.