

P.O. Box 119
GJOA HAVEN, NU X0B 1J0
TEL: (867) 360-6338
FAX: (867) 360-6369

kNK5 wmoEp5 vtmpq
NUNAVUT IMALIRIYIN KATIMAYINGI
NUNAVUT WATER BOARD
OFFICE DES EAUX DU NUNAVUT

WATER LICENCE APPLICATION FORM

Application for: (check one)

☒ **New** ☐ **Renewal** ☐ **Amendment** ☐ **Assignment** ☐ **Cancellation**

LICENCE NO: (for NWB use only)			
1. NAME AND MAILING ADDRESS OF APPLICANT/LICENSEE Dr. Scott Lamoureux <u>Department of Geography</u> <u>Queen's University</u> <u>Kingston, ON, K7L 3N6</u> Phone: <u>613-533-6033</u> Fax: <u>613-533-6122</u> e-mail: <u>scott.lamoureux@queensu.ca</u>	2. ADDRESS OF CORPORATE OFFICE IN CANADA (if applicable) _____ Phone: _____ Fax: _____ e-mail: _____		
3. LOCATION OF UNDERTAKING (describe and attach a topographical map, indicating the main components of the Undertaking) Location: Cape Bounty, Melville Island Latitude: (74°54' " N) Longitude: (109°35' " W) NTS Map Sheet No. <u>78F/15</u> Scale: <u>1:50 000 Cape Bounty</u>			
4. DESCRIPTION OF UNDERTAKING (attach plans and drawings) Field research camp composed of temporary tents and up to eleven people on site at a given time. Additionally, we are sampling two small watersheds intensively for water quality research. These samples are < 1 l per hour, with less than 10/l per day on a given stream or lake. Samples are filtered and a small quantity is retained for analyse, the remainder is disposed of unaltered into the soil. We are also operating several river measurement stations that contain temporary stilling wells and electronic sensors to continuously measure discharge, turbidity, and electrical conductivity. Several submersible instruments are deployed in the lakes to record similar parameters. All instruments are recovered at the end of each melt season.			
5. TYPE OF PRIMARY UNDERTAKING (A supplementary questionnaire <u>must</u> be submitted with the application for undertakings listed in " bold ") <table style="width: 100%; margin-top: 10px;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Industrial <input type="checkbox"/> Mining and Milling (includes exploration/drilling) <input type="checkbox"/> Municipal (includes camps/lodges) <input type="checkbox"/> Power </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Agricultural <input type="checkbox"/> Conservation <input type="checkbox"/> Recreational <input checked="" type="checkbox"/> Miscellaneous (describe below): </td> </tr> </table>		<input type="checkbox"/> Industrial <input type="checkbox"/> Mining and Milling (includes exploration/drilling) <input type="checkbox"/> Municipal (includes camps/lodges) <input type="checkbox"/> Power	<input type="checkbox"/> Agricultural <input type="checkbox"/> Conservation <input type="checkbox"/> Recreational <input checked="" type="checkbox"/> Miscellaneous (describe below):
<input type="checkbox"/> Industrial <input type="checkbox"/> Mining and Milling (includes exploration/drilling) <input type="checkbox"/> Municipal (includes camps/lodges) <input type="checkbox"/> Power	<input type="checkbox"/> Agricultural <input type="checkbox"/> Conservation <input type="checkbox"/> Recreational <input checked="" type="checkbox"/> Miscellaneous (describe below):		

Hydrological research, involving measurement of snowpack, river discharge, sediment transport, and natural water hydrochemistry. This research is intended to develop an understanding of the likely impacts of climate change on surface waters in the region. Work involves access to, crossing and sampling of streams and lakes. Additionally, a seasonal, temporary field camp is used by personnel. Water is collected manually in 20 L containers from the streams or lakes.

See Schedule II of *Northwest Territories Waters Regulations* for Description of Undertakings

6.	WATER USE <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input checked="" type="checkbox"/> To obtain water <input checked="" type="checkbox"/> To cross a watercourse <input type="checkbox"/> To modify the bed or bank of a watercourse </div> <div style="width: 48%;"> <input type="checkbox"/> Flood control <input type="checkbox"/> To divert a watercourse <input type="checkbox"/> To alter the flow of , or store, water </div> </div> <input checked="" type="checkbox"/> Other (describe): Sampling water for scientific purposes (dissolved and suspended sediment)
7.	QUANTITY OF WATER INVOLVED (cubic metres per day including both quantity to be used and quality to be returned to source) Water use <input checked="" type="checkbox"/> 100m ³ /day or less <input type="checkbox"/> Greater than 100m ³ /day; if greater, indicate quantities to be used for each purpose (camp, drilling, etc.) Water returned to source <u>0</u> m ³ /day
8.	WASTE (for each type of waste describe: composition, quantity (cubic metres per day), methods of treatment and disposal, etc.) <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <input checked="" type="checkbox"/> Sewage <input type="checkbox"/> Solid Waste <input type="checkbox"/> Hazardous <input type="checkbox"/> Bulky Items/Scrap Metal </div> <div style="width: 48%;"> <input type="checkbox"/> Waste oil <input checked="" type="checkbox"/> Greywater <input type="checkbox"/> Sludges <input type="checkbox"/> Other describe): <10 l/day greywater disposed in a shallow pit > 100 m from surface water. Solid sewage waste disposed in shallow pit >100 m from surface water by individual camp members. </div> </div>
9.	OTHER PERSONS OR PROPERTIES AFFECTED BY THIS UNDERTAKING (give name, mailing address and location; attach if necessary) <p>Our field research licence is screened by NRI, NIRB, the community and HTO in Resolute and other responsible agencies, including all funding agencies, for environmental and/or socio-economic impacts. This screening has not raised any issues or concerns since our initial licencing in 2003.</p> <div style="display: flex; justify-content: space-between;"> <div style="width: 40%;"> Land Use Permit DIAND Regional Inuit Association Commissioner </div> <div style="width: 60%;"> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, date expected _____ </div> <div style="display: flex; justify-content: space-between; margin-bottom: 10px;"> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If no, date expected _____ </div> <div style="display: flex; justify-content: space-between;"> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If no, date expected _____ </div> </div> </div>
10.	PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES (direct, indirect, cumulative impacts, etc.) <p>Work generates minimal impacts to surface waters. Our research requires exceptional care to prevent contamination or pollution in the surface waters, and we adhere to minimal disruption of waters, channel banks and shorelines. NIRB screening of our impacts and mitigation measures did not identify any concerns.</p> NIRB Screening <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If no, date expected _____

11. INUIT WATER RIGHTS

Will the project or activity substantially affect the quality, quantity, or flow of water flowing through Inuit Owned Lands and the rights of Inuit under Article 20 of the Nunavut Land Claims Agreement?

No

If yes, has the applicant entered into an agreement with the Designated Inuit organization to pay compensation for any loss or damage that may be caused by the alteration. If no compensation agreement has been made, how will compensation be determined?

No

12. CONTRACTORS AND SUB-CONTRACTORS (name, address and functions)

None

13. STUDIES UNDERTAKEN TO DATE (list and attach copies of studies, reports, research, etc.)

We have produced a number of scientific publications, student research reports and theses, and related documents about the hydrological environment at Cape Bounty. We are able to provide these on request, and would be willing to meet with the Board to provide an overview of our work.

14. THE FOLLOWING DOCUMENTS MUST BE INCLUDED WITH THE APPLICATION FOR THE REGULATORY PROCESS TO BEGIN

Supplementary Questionnaire (where applicable: see section 5) ☒ Yes ☐ No If no, date expected _____

Inuktitut and/or Inuinnaqtun/English Summary of Project ☒ Yes ☒ No If no, date expected _____

Application fee of \$30.00 (Payee Receiver General for Canada) ☐ Yes ☒ No If no, date expected _____

Water Use fee of \$30.00 (unless otherwise indicated in Section 9 of the *NWT Waters Regulations*; Payee Receiver General for Canada)

☐ Yes ☒ No If no, date expected _____

15. PROPOSED TIME SCHEDULE (unless otherwise indicated, the NWB will consider the application for a five (5) year term)

☐ one year or less (or) ☒ Multi Year

Start Date: 2008 Completion Date: 2015, potentially longer

Scott Lamoureux
Name (Print)

Associate Professor
Title (Print)

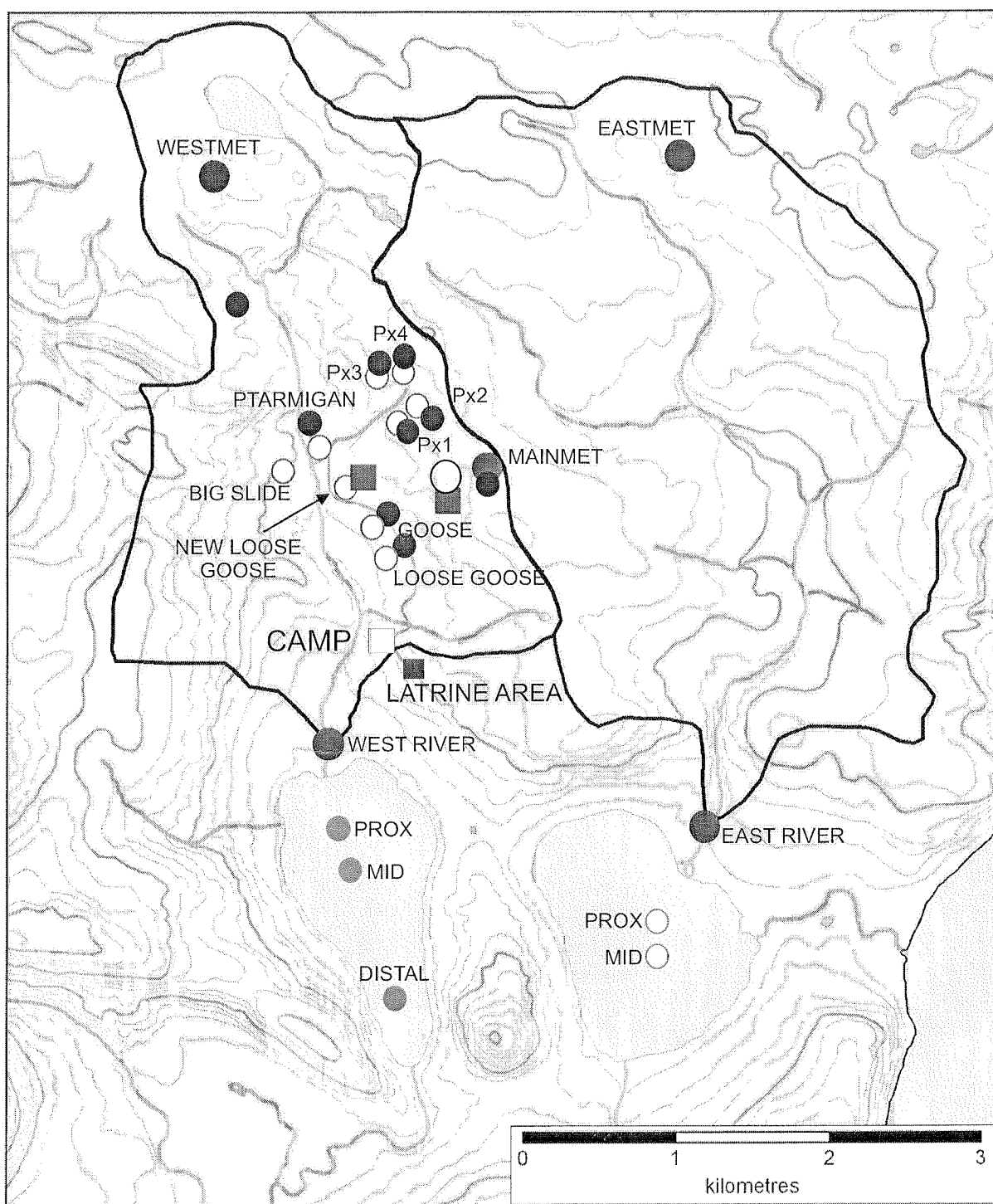

Signature

June 18, 2008
Date

For Nunavut Water Board office use only

APPLICATION FEE Amount: \$ _____ Pay ID No.: _____

WATER USE DEPOSIT Amount: \$ _____ Pay ID No.: _____



Contour interval 10 m

Source: NTS 78 F/15 1:50 000

Prepared by: S. Lamoureux 06/2008

Legend:

- Meteorological station
- River station, pump and manual sampling
- River station, manual sampling
- Soil moisture and active layer temperature station
- Limnology station (CTD, traps, frequent servicing)
- Atmospheric flux tower
- Proposed ITEX/CiCAT vegetation plot sites