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NUNAVUT IMALIRIYIN KATIMAYINGI
NUNAVUT WATER BOARD
OFFICE DES EAUX DU NUNAVUT

Effective June 16, 2006

WATER LICENCE APPLICATION FORM

Application for: (check one)

☒ New ☐ Renewal ☐ Amendment ☐ Assignment ☐ Cancellation

LICENCE NO: 10-1156-0000			
1. NAME AND MAILING ADDRESS OF APPLICANT/LICENSEE Dr. Melissa Lafreniere Department of Geography Queen's University Kingston, ON, K7L 3N6 Phone: 613-533-6000 x78720 Fax: 613-533-6122 e-mail: melissa.lafreniere@queensu.ca	2. ADDRESS OF CORPORATE OFFICE IN CANADA (if applicable) <div style="border: 1px solid black; padding: 5px; margin-top: 20px;"> Nunavut Water Board June 16, 2006 Public Registry </div>		
3. LOCATION OF UNDERTAKING (describe and attach a topographical map, indicating the main components of the Undertaking) Location: Drake Point, Melville Island Latitude: (76°24' " N) Longitude: (108°34' " W) NTS Map Sheet No. 79B/08 Scale: 1:50,000 Sabine Peninsula			
4. DESCRIPTION OF UNDERTAKING (attach plans and drawings) This research is intended to develop an understanding of the hydrologic and landscape controls on permafrost disturbance. Work involves access to, crossing and sampling of streams. Field research camp composed of temporary tents and up to four people at a given time. Water for camp needs will be collected manually from streams in 20L containers. Three rivers will be instrumented with electronic sensors to measure flow, level, temperature, and turbidity during the summer. Water samples (1L) will be collected manually at approximately 100 sites and used for analysis. All river stations require temporary structures that are located on existing banks. Sampling does not change the flow or discharge hazardous materials.			
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%;"> <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):		

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Hydrological research, involving measurement of river discharge,
sediment transport, and water chemistry.

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

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6. **WATER USE**

☒ To obtain water
 ☐ Flood control
☒ To cross a watercourse
 ☐ To divert a watercourse
☐ To modify the bed or bank of a watercourse
 ☐ To alter the flow of, or store, water
☒ 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 ☒ 100m³/day or less
☐ Greater than 100m³/day; if greater, indicate quantities to be used for each purpose (camp, drilling, etc.)

Water returned to source
 0 m³/day

8. **WASTE** (for each type of waste describe: composition, quantity (cubic metres per day), methods of treatment and disposal, etc.)

☒ Sewage
 ☐ Waste oil
☐ Solid Waste
 ☒ Greywater
☐ Hazardous
 ☐ Sludges
☐ Bulky Items/Scrap Metal
 ☐ 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.

9. **OTHER PERSONS OR PROPERTIES AFFECTED BY THIS UNDERTAKING** (give name, mailing address and location; attach if necessary)

Our field research licence is in the process of being 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 to date.

Land Use Permit
 DIAND ☐ Yes ☒ No If no, date expected _____

Regional Inuit Association ☐ Yes ☒ No If no, date expected _____

Commissioner ☐ Yes ☒ No If no, date expected _____

10. **PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES** (direct, indirect, cumulative impacts, etc.)

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 ☐ Yes ☒ No If no, date expected March 2010

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 at nearby study site, Cape Bonny. We are able to provide these on request, and would be willing to meet with the Board to provide an overview of our work planned in the Drake Point area.

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: 2010 Completion Date: 2013, potentially longer

Melissa Lafreniere
Name (Print)

Assistant Professor
Title (Print)


Signature

February 4, 2010
Date

For Nunavut Water Board office use only

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

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