



Water Resources  
Nunavut Regional Office  
P.O. Box 100  
Iqaluit, NU, X0A 0H0

Your file - Votre référence  
3BC-DRA1012

April 10, 2013

Our file - Notre référence  
CIDM# 654056

Phyllis Beaulieu  
Manager, Licensing  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU, X0A 1J0

**Re: Application for Renewal – Melissa Lafreniere (Queen's University) - Drake Project**

Dear Phyllis Beaulieu:

Aboriginal Affairs and Northern Development Canada (AANDC) has performed a review of the water licence renewal application 3BC-DRA1012 submitted by Melissa Lafreniere (Queen's University) to the Nunavut Water Board (NWB). The following advice has been provided pursuant to AANDC's mandated responsibilities under the Nunavut Waters and Nunavut Surface Rights Tribunal Act (NWNSRTA) and the Department of Indian Affairs and Northern Development Act (DIAND Act). In conducting our review, AANDC referred to the documents on the NWB's FTP-site under 3BC-DRA1012.

Should you have any questions or comments, please do not hesitate to contact me at (867) 975-4568 or by e-mail at [Rory.MacDonald@aandc-aadnc.gc.ca](mailto:Rory.MacDonald@aandc-aadnc.gc.ca)

Regards,

Sent via Email

Rory MacDonald  
Water Resources Technician

Cc. Murray Ball, Manager of Water Resources, AANDC  
Erik Allain, Manager of Field Operations, AANDC



Technical Review Memorandum

To: Phyllis Beaulieu – Manager of Licensing, Nunavut Water Board

From: Rory MacDonald – Water Resources Technician, AANDC

Existing Water Licence: 3BC-DRA1012

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**Re: Application for Renewal – Melissa Lafreniere (Queen's University) - Drake Project**

1. Project Description

The proposed research of the Drake Project is intended to develop an understanding of hydrological and landscape controls on permafrost disturbance. The Drake Project is located on Melville Island's Sabine Peninsula in Nunavut's High Arctic.

Proposed work for 2013 field season involves accessing, crossing, and sampling streams within the project area. A temporary camp capable of accommodating four (4) people will be established nearby a river, stream, or lake that can serve as a potable water source. The camp's location will also be selected based on the surrounding landscape ability to support an airstrip. Anticipated field season will run for four (4) weeks in July and August. Queen's University anticipates requiring 30L of water for domestic purposes on a daily basis in addition to their water quality sampling requirements. All wastewater (sewage and gray water) will be directed to sumps.

Three (3) rivers will be instrumented with electronic sensors to measure flow, level, temperature, and turbidity. Water samples will be collected at less than 100 sites at approximately 1L per site (total water samples < 100L). All river stations will require temporary structures located on the existing river bank.

2. Results of Review and Recommendations

AANDC Water Resources Division offers the following comments and recommendations for the Board's consideration.

A. General

- AANDC recommends that Queen's University not cause erosion to the banks of any body of water. This should apply to all aspects of the proposed research project.
- The proponent requests crossings of watercourses. AANDC recommends that the proponent receive all required authorizations (i.e. DFO) for watercourse crossings and provide to NWB prior to issuance of this licence.
- Ground travel by All Terrain Vehicle (ATV) should have minimal impact on the local environment, including river and stream crossings.

B. Water Use

- The daily water consumption should take into account both domestic (camp) and research (sampling) requirements. To avoid any unnecessary compliance issues, AANDC recommends that the water use be set at a minimum of 5m<sup>3</sup>/day.