

February 20, 2014

Phyllis Beaulieu
Manager of Licensing
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU
X0B 1J0
867-360-6338 ext: 26

Dear. Mrs. Beaulieu:

My name is Matthew Alkire and I am a research scientist working at the University of Washington in Seattle. I would like to apply to the Nunavut Water Board for approval for the use of water without a license in five field sites throughout Nunavut, including the Coppermine, Ellice, Back, Cunningham and Clyde Rivers. The use of water from these source will be strictly limited to the sampling of rivers and their surrounding estuaries in order to characterize the geochemistry of the rivers and their impact on the freshwater budget of the estuaries into which they flow. This sampling will be conducted as part of research project entitled *Assessing the impact of small, Canadian Arctic river flows to the freshwater budget of the Canadian Archipelago*. We will not deposit waste at any of the proposed field sites during this project.

The goal of this project is to determine if small rivers of the Canadian Archipelago are chemically distinct from larger North American rivers such as the Mackenzie and Yukon Rivers. A research team of four people will collect water samples from seven different rivers and their estuaries in Nunavut and the Northwest Territories over a three-year study period. In 2014, we plan to focus solely on river sampling. Each site will be visited via small aircraft (Twin Otter operated by Kenn Borek Air) and sampled over 3-5 days during late June/early July (after the spring floods). These samples will be collected either by hand or by peristaltic pumps carried by researchers from shore, via wading, or through the use of inflatable boats equipped with outboard motors. We plan to hire guides and wildlife monitors in coordination with Hunters and Trappers Organizations in Kugluktuk and Clyde River to provide safety and offer guidance such that environmental impacts may be minimized. In addition, we also plan to hire field technicians from these local communities and train them so that they can conduct additional sampling from the rivers on a weekly basis independently. The data resulting from these regular sampling operations will yield a time series describing the seasonal evolution of the rivers' chemistry during varying flow rates throughout the spring, summer, and fall.

Please find my application form (attached) as well as the Screening Decision Report I've recently received from the Nunavut Impact Review Board after applying for a scientific research license through the Nunavut Research Institute. If you require any additional information regarding the proposed project, please do not hesitate to contact me via phone (206-897-1623) or e-mail (malkire@apl.washington.edu). Thank you for your consideration.

Sincerely,

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