



NIRB File No.: 16YN002
NPC File No.: 148191

February 12, 2016

Dr. Laura Brown
Department of Geography
University of Toronto Mississauga
Mississauga, ON L5L 1C6

Sent via email: lc.brown@utoronto.ca

Re: Notice of Screening for University of Toronto's "Lake Ice in the Canadian High Arctic" project proposal

Dear Dr. Laura Brown:

On January 27, 2016 the Nunavut Impact Review Board (NIRB or Board) received a referral to screen University of Toronto's (U of T) "Lake Ice in the Canadian High Arctic" project proposal from the Nunavut Planning Commission (NPC or Commission), with an accompanying positive conformity determination with the North Baffin Regional Land Use Plan. Pursuant to section 86 of the *Nunavut Planning and Project Assessment Act* (NuPPAA), the NIRB has commenced screening this project proposal and has assigned it file number **16YN002**- please reference this file number in all future related correspondence.

PROJECT SCOPE

Project Scope:

The proposed "Lake Ice in the Canadian High Arctic" project is located within the North Baffin Region, within 10 kilometres (km) of Resolute Bay, in addition to locations on Bathurst Island within Polar Bear Pass National Wildlife Area. The Proponent intends to monitor lake ice through deployment and operation of ice logging sensors, and drilling holes in lake ice to measure thickness and examine ice structures. The program is proposed to take place annually from May to September, 2016 through 2018.

According to the project proposal, the scope of the project includes the following works or activities:

- Set-up, operation and decommissioning of ice sensors in lakes near Resolute in Small Lake, Char Lake and Resolute Lake, as well as in Hunting Camp Lake within the Polar Bear Pass National Wildlife Area;

- Use of ice-augers for drilling small holes in lake ice to measure the thickness, and examine the ice structures;
- Retrieval of data from an established long-term automatic weather station at Polar Bear Pass National Wildlife Area;
- Use of snowmobiles to travel to the lakes around Resolute, and subsequent use of helicopter to travel to Polar Bear Pass National Wildlife Area for sampling;
- Involvement of community members in local sampling;
- Use of 60 litre (L) of gasoline, and 700L of aviation fuel, which would be stored at Polar Continental Shelf Program (PCSP) in Resolute, with small amounts to be used at the Polar Bear Pass National Wildlife Area;
- Use and storage of 400 litre (L) of Jet B fuel, which would be cached near the airstrip at Polar Bear Pass National Wildlife Area and later removed by PCSP at the end of the season;
- Use of propane for cooking, and battery to power a digital camera;
- Wastes generated at sampling sites to be transported to Resolute for proper disposal, with used batteries disposed of at PCSP or shipped back to the university for environmentally safe disposal; and
- Utilize existing cabin at Polar Bear Pass National Wildlife Area, as well as other infrastructure and logistical support through PCSP.

At this time, the NIRB has identified no additional works or activities in relation to the project proposal. As a result, the NIRB will proceed with screening the project based on the scope as described above.

REQUEST FOR COMMENTS

All documents received and pertaining to this project proposal can be obtained from the NIRB's online public registry at the following location

<http://ftp.nirb.ca/01-SCREENINGS/ACTIVE%20SCREENINGS/16YN002-U%20of%20Toronto-Lake%20Ice/> and include:

- *NPC Screening Referral*
- *NRI Scientific Research Licence Application Form*
- *Non-technical Project Proposal summary in English, French and Inuktitut*
- *Map of sampling locations (note that map of the sampling areas can be viewed by using the specific NIRB file number as the keyword search for projects in the updated public registry)*

The NIRB will copy you on screening process related correspondence and upload related documents to the above ftp site for public access. The NIRB may request additional information at any time during the process.

The NIRB is copying parties and municipalities potentially affected by U of T's project proposal with this letter, and we invite interested parties to comment directly to the NIRB by **Tuesday, February 23, 2016**.

The NIRB would like parties to provide comments regarding:

- Whether the project proposal is likely to arouse significant public concern; and if so, why;
- Whether the project proposal is likely to cause significant adverse eco-systemic or socio-economic effects; and if so, why;
- Whether the project is likely to cause significant adverse impacts on wildlife habitat or Inuit harvest activities; if so, why;
- Whether the project is of a type where the potential adverse effects are highly predictable and mitigable with known technology, (please provide any recommended mitigation measures); and
- Any matter of importance to the Party related to the project proposal.

Please note that *proposed* project-specific terms and conditions, should the project proceed, have been attached for consideration and comment (**Appendix A**).

CONTACT INFORMATION

Please send your comments to the NIRB at info@nirb.ca or via fax at (867) 983-2594. **The NIRB has recently launched an updated online public registry, and parties can access project information as well as submit comments directly to the NIRB via www.nirb.ca.**

If you have any questions or require clarification, please contact the undersigned at (867) 983-4603 or at samuno@nirb.ca.

Sincerely,



Solomon Amuno, PhD
 Technical Advisor II
 Nunavut Impact Review Board

cc: Distribution List
 Brian Aglukark, Nunavut Planning Commission
 Karèn Kharatyan, Nunavut Water Board
 Joel Fortier, Qikiqtani Inuit Association
 Mosha Cote, Nunavut Research Institute
 Tracey McCaie, Indigenous and Northern Affairs Canada
 Mia Pelletier, Canadian Wildlife Service

Attachment: Appendix A – *Proposed* Project Specific Terms and Conditions

Enclosures (4): Public Notice of Screening (English and Inuktitut)
 Comment Forms (English and Inuktitut)

Appendix A
Proposed Project Specific Terms and Conditions

The following is a list of project-specific terms and conditions which, should the project proceed, may be recommended to be attached to any approval.

General

1. University of Toronto (the Proponent) shall maintain a copy of the Project Terms and Conditions at the site of operation at all times.
2. The Proponent shall forward copies of all permits obtained and required for this project to the Nunavut Impact Review Board (NIRB) prior to the commencement of the project.
3. The Proponent shall operate the site in accordance with all applicable Acts, Regulations and Guidelines.

Water

4. The Proponent shall not use water, including constructing or disturbing any stream, lakebed or the banks of any definable water course unless approved by the Nunavut Water Board.

Waste Disposal/Incineration

5. The Proponent shall keep all garbage and debris in bags placed in a covered metal container or equivalent until disposed of at an approved facility. All such wastes shall be kept inaccessible to wildlife at all times.

Fuel and Chemical Storage

6. Unless otherwise authorized by the Nunavut Water Board, the Proponent shall locate all fuel and other hazardous materials a minimum of thirty-one (31) metres away from the high water mark of any water body and in such a manner as to prevent their release into the environment.
7. The Proponent shall ensure that re-fueling of all equipment occurs a minimum of thirty-one (31) metres away from the high water mark of any water body, unless otherwise authorized by the Nunavut Water Board.
8. The Proponent shall store all fuel and chemicals in such a manner that they are inaccessible to wildlife.
9. The Proponent shall use adequate secondary containment or a surface liner (e.g., self-supporting insta-berms and fold-a-tanks), when storing barreled fuel and chemicals at all locations.
10. The Proponent shall ensure that appropriate spill response equipment and clean-up materials (e.g., shovels, pumps, barrels, drip pans, and absorbents) are readily available during any transfer of fuel or hazardous substances, and at all fuel storage sites.
11. The Proponent shall ensure that all personnel are properly trained in fuel and hazardous waste handling procedures, as well as spill response procedures. All spills of fuel or other deleterious materials of any amount must be reported immediately to the 24 hour Spill Line at (867) 920-8130.

Wildlife - General

12. The Proponent shall ensure that there is no damage to wildlife habitat in conducting this operation.
13. The Proponent shall not harass wildlife. This includes persistently worrying or chasing animals, or disturbing large groups of animals. The Proponent shall not hunt or fish, unless proper Nunavut authorizations have been acquired.
14. The Proponent shall ensure that all project personnel are made aware of the measures to protect wildlife and are provided with training and/or advice on how to implement these measures.

Migratory Birds and Raptors Disturbance

15. The Proponent shall not disturb or destroy the nests or eggs of any birds. If nests are encountered and/or identified, the Proponent shall take precaution to avoid further interaction and or disturbance (e.g., a 100 metre buffer around the nests). If active nests of any birds are discovered (i.e., with eggs or young), the Proponent shall avoid these areas until nesting is complete and the young have left the nest.
16. The Proponent shall minimize activities during periods when birds are particularly sensitive to disturbance such as migration, nesting and moulting.
17. The Proponent shall avoid the seaward site of seabird colonies and areas used by flocks of migrating waterfowl by 3 kilometres.
18. The Proponent shall ensure its aircraft avoid excessive hovering or circling over areas where bird presence is likely.

Aircraft Flight Restrictions

19. The Proponent shall restrict aircraft/helicopter activity related to the project to a minimum altitude of 610 metres above ground level unless there is a specific requirement for low-level flying, which does not disturb wildlife and migratory birds.
20. The Proponent shall ensure that aircraft maintain a vertical distance of 1000 metres and a horizontal distance of 1500 metres from any observed groups (colonies) of migratory birds. Aircraft should avoid critical and sensitive wildlife areas at all times by choosing alternate flight corridors.
21. The Proponent shall ensure that aircraft/helicopter do not, unless for emergency, touch-down in areas where wildlife are present.

Caribou and Muskoxen Disturbance

22. The Proponent shall cease activities that may interfere with the migration or calving of caribou or muskox, until the caribou or muskox have passed or left the area.

Ground Disturbance

23. The Proponent shall not move any equipment or vehicles unless the ground surface is in a state capable of fully supporting the equipment or vehicles without rutting or gouging. Overland travel of equipment or vehicles must be suspended if rutting occurs.

Temporary Camps and Land Use

24. The Proponent shall not erect camps or store material on the surface ice of lakes or streams.
25. The Proponent shall ensure that the land use area is kept clean and tidy at all times.

Restoration of Disturbed Areas

26. The Proponent shall remove all garbage, fuel and equipment upon abandonment.
27. The Proponent shall complete all clean-up and restoration of the lands used prior to the end of each field season and/or upon abandonment of site.

Other

28. The Proponent should, to the extent possible, hire local people and to consult with local residents regarding their activities in the region.
29. The Proponent shall ensure that project activities do not interfere with Inuit wildlife harvesting or traditional land use activities.
30. Any activity related to this application, and outside the original scope of the project as described in the application, will be considered a new project and should be submitted to the NIRB for Screening.