

R. Troy McMullin, Ph.D.  
Research Scientist  
Canadian Museum of Nature  
PO Box 3443 Stn D  
Ottawa, Ontario, Canada K1P 6P4

Nunavut Water Board P.O. Box 119  
Gjoa Haven, Nunavut X0B 1J0 Canada

27 February 2017

Dear Nunavut Water Board Manager of Licensing:

**RE: Application for the use of water or deposit of waste without a licence**

Please find attached a completed and signed application for the use of water or deposit of waste without a licence, in support of botanical research to study and collect plants in Nunavut in July, 2017.

This document is being submitted electronically (filename: McMullin NWB Application 2017.pdf).

Included in this file are, in the following order:

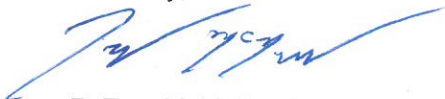
- 1) This cover letter [page 1]
- 2) Executive summary of application (in English) [page 2]
- 3) Executive summary of application (in Inuktitut) [page 3]
- 4) Application for the use of water or deposit of waste without a licence [pages 4–14]

In addition to this application, I have included a Spill Contingency Plan, I have submitted an application to the Wildlife Research Section, Nunavut Department of Environment for a Wildlife Research permit, and an application to Qikiqtani Inuit Association for Access to Inuit Owned Land.

If the application is missing information, please do not hesitate to contact me for further details.

Thank you for considering this signed application for the use of water or deposit of waste without a licence.

Sincerely,



R. Troy McMullin, Ph.D.  
Email: TMcMullin@mus-nature.ca  
Phone: 613.566.4298

## EXECUTIVE SUMMARY OF WATER LICENCE APPLICATION

27 February 2017

**Applicant:** R. Troy McMullin

**Research Project Title:** Lichens of the High Arctic; Flora of the Canadian Arctic

### Location of the Undertaking:

1. The region south of the Maguse River, north of Arviat, 61°16'N, 94°13'W, 11-15 July 2016. The community of Resolute (74°43'4.03"N, 94°57'37.90"W) and surrounding area. (1-7 July, 2017).
2. Sites on Little Cornwallis Island (PCSP support dependent). (One day between 1-7 July, 2017).
3. Sites on the west coast of Devon Island (PCSP support dependent). (One day between 1-7 July, 2017).
4. Eureka and vicinity, Ellesmere Island (79°59'19.84"N, 85°56'23.75"W). (7-10 July 2017).
5. McGill Arctic Research Station (79°24'53.41"N, 90°44'52.19"W), Expedition Fiord, Axel Heiberg Island (PCSP support dependent) (10-15 July 2017).
6. Lake Hazen Camp (81°49'20.07"N, 71°24'20.23"W), Quttinirpaaq National Park, Ellesmere Island. (15-25 July 2017).

### Description of the Undertaking:

The composition and distribution of lichens plants in the Canadian Arctic is likely to experience a major shift in the coming century in response to climate change, but detailed information on lichen and plant diversity, necessary to track future change, is lacking for many Arctic regions. The flora of some Arctic regions have never been explored, and many regions are poorly and incompletely studied. We plan to conduct field work in July 2017 around 3-6 high-Arctic locations in Nunavut: Resolute, Little Cornwallis Island (dependent on PCSP funding), the west coast of Devon Island (dependent on PCSP funding), Eureka, the McGill Arctic Research Station (dependent on PCSP funding), and the Parks Canada camp at Lake Hazen. Lichen diversity at these sites has not been studied in detail. We will document lichen plant biodiversity at all sites by exploring (on foot) different habitats, and making collections of all the species we find. Collections will be dried in a plant press, and the specimens will be stored in the plant collection at the Canadian Museum of Nature, Ottawa, where they will contribute to on-going efforts to document all the plants and lichens in the Canadian Arctic. Our research team includes two people, and we will set up a small, temporary camps near existing research stations at our last three proposed locations.

**Water use:** Water will be used only for domestic purposes (drinking, cooking, washing) in our field camps.

**Quantity of water involved:** 2 people x 5L/person/day = 10 L/day = 0.010 m<sup>3</sup>/day

**Waste:** Grey water (from cooking and washing). Sewage (human excrement; five people)

**Other persons or properties affected by the undertaking:** n/a

**Predicted environmental impacts of the undertaking and proposed mitigation measures:** None expected, as we will be using a very small volume of water, only for domestic purposes.







P.O. Box 119

GJOA HAVEN, NU X0B 1J0

TEL: (867) 360-6338

FAX: (867) 360-6369

kNK5 wmoEp5 vtmp5

NUNAVUT WATER BOARD

NUNAVUT IMALIRIYIN KATIMAYIT

OFFICE DES EAUX DU NUNAVUT

## APPLICATION FOR APPROVAL FOR THE USE OF WATER OR DEPOSIT OF WASTE WITHOUT A LICENCE

Refer to the Guide to the Approval for the Use of Water or Deposit of Waste Without a Licence (Guide) in completing this Application.

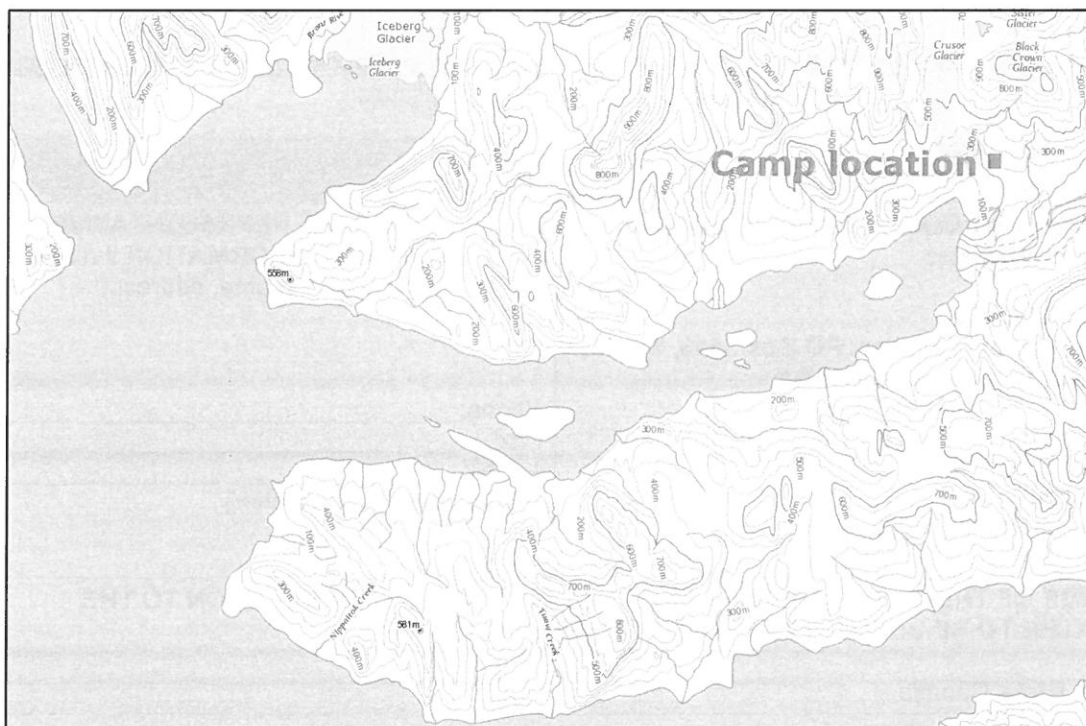
APPLICATION NO: (for NWB use only)	
<b>1. APPLICANT CONTACT INFORMATION</b> (name, address)  <b>Dr. R. Troy McMullin</b> <b>Canadian Museum of Nature, PO Box 3443, Stn. D,</b> <b>Ottawa, Ontario, K1Y 1X7 CANADA</b>  Phone: 1.613.566.4298 Fax: 1.613.364.4027 e-mail: tmcmullin@mus-nature.ca	<b>2. APPLICANT REPRESENTATIVE</b> <b>CONTACT INFORMATION</b> if different from Block 1 (name, address)  Phone: _____ Fax: _____ e-mail: _____ (Attach authorization letter)
<b>3. NAME OF THE OWNER OF THE LAND THAT WILL BE USED IN RELATION TO THE WATER TO BE USED OR THE WASTE TO BE DEPOSITED</b>  Crown land; Parks Canada	
<b>4. NAME OF PROJECT</b> (consistent with the name of the project issued by other regulatory agencies)  Project title: <b>Lichens of the High Arctic; Flora of the Canadian Arctic</b> Project location: 1. The community of Resolute (74°43'4.03"N, 94°57'37.90"W) and surrounding area. 2. Sites on Little Cornwallis Island. 3. Sites on the west coast of Devon Island. 4. Eureka and vicinity, Ellesmere Island (79°59'19.84"N, 85°56'23.75"W). 5. McGill Arctic Research Station (79°24'53.41"N, 90°44'52.19"W), Expedition Fiord, Axel Heiberg Island. 6. Lake Hazen Camp (81°49'20.07"N, 71°24'20.23"W), Quttinirpaaq National Park, Ellesmere Island.	
<b>5. LOCATION OF UNDERTAKING</b>  <b>Project Extents</b>  NW: Latitude: (82°11'N) Longitude: (78°23'W)	

NE: Latitude: (82°11'N) Longitude: (67°10'W)  
SE: Latitude: (74°33'N) Longitude: (67°10'W)  
SW: Latitude: (74°33'N) Longitude: (78°23'W)

Camp Location(s): [NOTE: at Resolute and Eureka we will be staying at Polar Continental Shelf Program accommodations, and we will only be visiting Little Cornwallis Island and Devon Island on day trips.

1. **McGill Arctic Research Station (79°24'53.41"N, 90°44'52.19"W), Expedition Fiord, Axel Heiberg Island (PCSP support dependent).**
2. **Lake Hazen Camp (81°49'20.07"N, 71°24'20.23"W), Quttinirpaaq National Park, Ellesmere Island**

**MAP** - Attach a topographical map, indicating the main components of the undertaking.



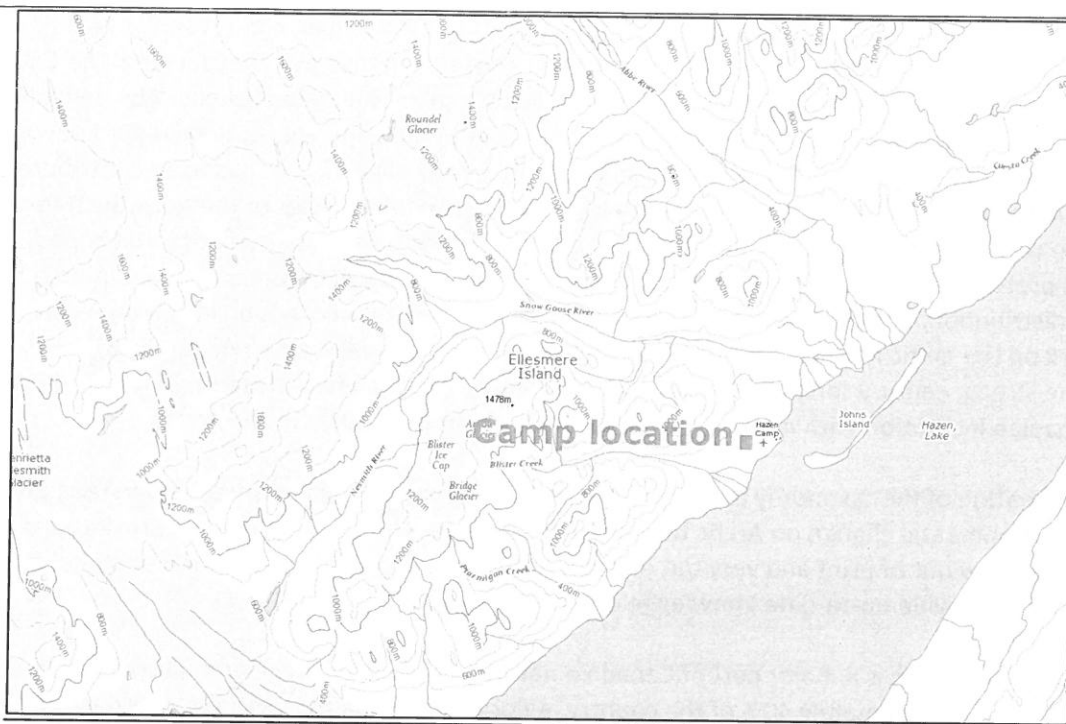
**Map 1: McGill Arctic Research Station**

NTS Map Sheet No.: 59H

Map Name: **STRAND FIORD**

Map Scale: 1:145 000





Map 2: Lake Hazen Camp  
NTS Map Sheet No.: 120C  
Map Scale: 1:145 000

Map Name: **LADY FRANKLIN BAY**

**Name of the Water Management Area in which the Undertaking is located.** (Please see Appendix D of the Guide):

- 58. Sverdrup Islands Watershed
- 59. Nansen and Eureka Sounds Watershed
- 62. Northeastern Ellesmere Island Watershed

**6. CLASSIFICATION OF UNDERTAKING** - Indicate the classification of undertaking by checking one of the following boxes.

- ☐ Industrial
- ☐ Mining
- ☐ Conservation
- ☐ Municipal

- ☐ Agricultural
- ☐ Recreational
- ☐ Power
- ☒ Other: (describe)

**We will be conducting botanical research and collecting lichen and plant specimens to document the biodiversity and distribution of the flora in the regions in which we plan to work (see project proposal above).**

**7. DESCRIPTION OF UNDERTAKING AND EQUIPMENT USED** – Provide a brief description of the undertaking including a description of any equipment that will be used in using water or depositing waste.

**Lichens of the High Arctic; Flora of the Canadian Arctic**

Arctic regions of the world are among the most rapidly changing on the planet, in response to global climate change, substantial changes to Arctic vegetation are being documented by scientists.

Understanding the composition and distribution of the Arctic flora in the past and present is critical to documenting change in the future. This research program aims to increase our knowledge of the Canadian Arctic flora through floristic and systematic studies of Arctic vascular plants and lichens. We are working to document where Arctic vascular plant and lichen species occur in time and space, to increase knowledge of their identities (i.e., taxonomy), building on the substantial body of work that has been contributed by researchers in the past, and to understand the evolutionary history of a subset of the flora. Such research is essential in serving as a basis for biodiversity, ecological, conservation, and environmental impact studies. This project will provide comprehensive baseline data on Arctic lichens and vascular plants (taxonomy, distribution, ecology), with the goal of producing a complete flora. It builds on our extensive, ongoing work on the arctic flora (see summary of our recent research progress in Appendix B), and continues the strong, century-long tradition of arctic botany at the Canadian Museum of Nature (CMN), the only Canadian institution with major plant systematic research activities in the Arctic.

#### **Arctic Flora**

Detailed information of the taxonomy and distributions of Arctic flora is necessary to understand potential impacts of environmental change on Arctic terrestrial ecosystems. Unfortunately, most previous regional Arctic floras are now out of print and very out of date, and there is no single publication or digital resource available that can provide up-to-date knowledge on the Canadian Arctic flora.

Although the Arctic region is a major part of Canadian natural heritage, with the area above tree line in Canada comprising approximately 40% of the country, a flora treating all the vascular plants across the whole Canadian Arctic region has never been produced. The objectives of our research are to revise, develop, increase and disseminate the taxonomic knowledge base for the Arctic flora. Our research focus is broad, examining the "big picture" of understanding Arctic plant biodiversity in Canada: what are the species, and where do they occur? Our immediate objective is to synthesize existing collection-based knowledge, and to gather new knowledge on Arctic plants and lichens by undertaking work in areas of the Canadian Arctic that are botanically poorly known.

#### **Arctic Floristics**

Vascular Plants: We are conducting field work in botanically understudied areas of the Canadian Arctic to develop new and comprehensive baseline data for these areas, contributing to our understanding of species distributions and diversity in the Canadian Arctic as a whole. Our eight Arctic field seasons since 2008 have resulted in over 7000 new plant collections, which are deposited in the National Herbarium and other herbaria in Canada and internationally. We also collect silica-gel dried material for every collection of Arctic plant and lichen for use in molecular research. For each area we work in, we aim to produce a detailed floristic account of the vascular plants of the area, based on all collections made there, including ours and those made by previous researchers.

Lichens: In the Canadian Arctic, many lichens are conspicuous and abundant. As a result, the large charismatic species have been somewhat widely collected by expedition teams sampling opportunistically, but most of the region has not been examined by a professional lichenologist, particularly in the high Arctic. Many lichen species are inconspicuous and often overlooked, and while 1750 lichens have been reported in the circumpolar Arctic, only 1026 species from the North American Arctic. The similar large scale environmental conditions throughout the Arctic suggest that the 724 species occurring elsewhere are likely in the Canadian Arctic. Substantial work remains in order to understand lichen diversity in the Canadian Arctic. Lichen collections from this trip will also be used to support a proposed postdoctoral research project on Arctic lichen floristics at Memorial University (under the supervision of T. McMullin).



### 2017 Fieldwork in Nunavut

We plan to conduct field work in July 2017; studying the lichen and vascular plant flora of 3-6 locations, dependant on finalization of in-kind support from the Polar Continental Shelf Program (see maps in Appendix A):

1. The community of Resolute (74°43'4.03"N, 94°57'37.90"W) and surrounding area.
2. Sites on Little Cornwallis Island.
3. Sites on the west coast of Devon Island.
4. Eureka and vicinity, Ellesmere Island (79°59'19.84"N, 85°56'23.75"W).
5. McGill Arctic Research Station (79°24'53.41"N, 90°44'52.19"W), Expedition Fiord, Axel Heiberg Island.
6. Lake Hazen Camp (81°49'20.07"N, 71°24'20.23"W), Quttinirpaaq National Park, Ellesmere Island.

Lichen species diversity in these locations has not been previously studied, and what collections do exist have been made opportunistically by non-specialists (i.e. not lichenologists). In some cases, collections from this area were made with imprecise collection localities (unpublished data from the National Herbarium of Canada), and no comprehensive studies of the lichen flora have been conducted. This fieldwork therefore represents one of the first opportunities a trained lichenologist will conduct a thorough inventory of Canadian High Arctic lichens.

While there are few (or no) collections of vascular plants from Little Cornwallis Island, and the west coast of Devon Island, Resolute, Eureka, and Expedition Fiord are relatively well-collected (unpublished data from the National Herbarium of Canada), and the vascular plant flora of Lake Hazen has been well documented (Savile 1964; Soper and Powell 1985). However, even in well collected areas in the Canadian Arctic, trained botanist are still making new discoveries in the local flora. Examples include the addition of two new vascular plant species documented for Somerset Island (Sokoloff 2015), and 14 new vascular plant records for Nunavut along the lower Coppermine River (Saarela et al. *in press*). We will also recollect vascular plant species previously documented for these regions, as these records will provide an updated "snapshot" of the local flora at this point in time, adding new information to the continuous record of vegetation data in the Canadian high Arctic.

### References

1. Saarela JM, PC Sokoloff, RD Bull. *In press*. Vascular plant biodiversity of the lower Coppermine River valley and vicinity (Nunavut, Canada): an annotated checklist of an Arctic flora. *PeerJ*.
2. Savile, DBO. 1964. General ecology and vascular plants of the Hazen Camp area. *Arctic*, 17(4), 237-258.
3. Soper JH, Powell JM. 1985. Botanical studies in the Lake Hazen Region, northern Ellesmere Island, Northwest Territories, Canada. *National Museums of Canada. Publications in Natural Sciences* 5.
4. Sokoloff, PC. 2015. The flora of Cunningham Inlet, Somerset Island, Nunavut: history, analysis, and new collections of vascular plants, mosses, lichens, and algae. *Canadian Field-Naturalist* 129(1): 24–37.

### Objectives:

Our overall goals are to gain a more complete understanding of the present state of the distribution and composition of the Canadian arctic flora and to expand the knowledge base for understanding the broad-scale impacts of environmental change on the arctic flora.

The data and specimens collected on this trip will be used in support of several projects:

1. a floristic study of the collected areas, published in a peer-reviewed journal;
2. the Arctic Flora of Canada and Alaska project, led by the Canadian Museum of Nature, which will treat all vascular plants in the entire Canadian Arctic and the North Slope of Alaska

(<http://arcticplants.myspecies.info/>)

3. DNA barcoding studies of the Arctic flora (e.g., Saarela et al. 2013);
4. a postdoctoral research project on Arctic lichen floristics at Memorial University (under the supervision of T. McMullin).
5. Ongoing and future taxonomic/systematic studies of Arctic lichen and plant species. Once incorporated into herbaria, the specimens will be available to all scientists for study, and the data will be shared internationally through digital biodiversity repositories, such as the Global Biodiversity Information Facility and the Collections Online website at the Canadian Museum of Nature.

### **Management Implications**

Our research will provide new and up-to-date information on lichen and vascular plant diversity in the Canadian High Arctic. This baseline information will inform future land management plans related to plants in the region, providing data crucial to measuring the effects of climate change and development within the studied areas.

### **Specimen Collecting Methods**

We will undertake research in the vicinities of each site by foot, complete plant inventories of all lichens and vascular plants, and collect data on conservation status, ecology, distribution, and population variation as appropriate. All of these data will be useful for long-term monitoring of potential changes in species diversity in the future.

Approximately 1000 lichen and vascular plant specimens will be collected, photographed, and studied. Collections will be deposited at the National Herbarium of Canada (Canadian Museum of Nature), and duplicate specimens will be distributed to national and international herbaria, all contributing to the permanent scientific record documenting the distributions of Arctic lichen and plant species in time and space. As time permits we will make occasional collections of algae, fungi and bryophytes.

Lichen specimens are collected from the environment by hand, using a small knife, or by using a hammer and chisel for crustose (rock-growing) specimens. These lichens are dried in the field in paper bags. Vascular plant specimens are collected using a plant press, the standard method that botanists have used for several centuries. Once collected, plant specimens are arranged into sheets of newspaper, placed between two pieces of cardboard, piled up, and tightened with two straps. The specimens are flattened and dried in the press; once dry they will last for centuries when stored in a herbarium (dried plant collection).

For each collection event we:

- Collect one to several individuals of a species (depending on the size of an individual, and how common the species is locally). If a species is not common, we collect only enough material to properly document its occurrence at the site. If a species is rare, we do not collect any specimens, and document its occurrence only with photographs.
- Record detailed notes on the location of the species, its local growing conditions, and other species that grow at the site. In a subset of instances we take photographs of the species growing in its natural state.
- Preserve a small amount of tissue from the specimen in silica gel (a desiccant), which rapidly dries the genetic material in the leaf tissue in a way that is suitable for later study (e.g., DNA sequencing) in the molecular laboratory.

8. **SCHEDULE** – Applicants are advised that approvals without a licence are issued for a one year term.

Proposed Start Date: **1 July 2017**  
(Month/Year)

Proposed Completion Date: **31 July 2017**  
(Month/Year)

9. **TYPE OF USE OF WATER WITHOUT A LICENCE PROPOSED** - Check the box that applies to the type of water use proposed. If none of the water uses listed below applies to the proposed water use, an application for a water licence will be required. See the NWB's Guide 4 – Completing and Submitting a Water Licence Application for a New Licence.

- ☐ For an undertaking other than a Power undertaking and for a use of water related to the construction of a structure across a watercourse that is less than 5 metres wide at the ordinary high water mark at the point of construction.
- ☐ For an undertaking other than a Power undertaking and for a use of water related to the training of an intermittent watercourse.
- ☐ For an undertaking other than a Power undertaking and for a use of water related to the training of a watercourse that involves the infilling of the watercourse, if the watercourse has no inflow or outflow and a surface area of less than 0.5 hectares.
- ☐ For an undertaking other than a Power undertaking and for a use of water related to the training of a watercourse that involves removal or placement of less than 100 m<sup>3</sup> of material.
- ☐ For an undertaking other than a Power undertaking and for a use of water related to the construction of a temporary structure in a watercourse for the purpose of flood control.
- ☐ For an undertaking other than a Power undertaking and for any use of water related to the storage of 2,500 m<sup>3</sup> or less.
- ☒ For an undertaking other than a Power undertaking and for any use of water less than 50 m<sup>3</sup> per day.

10. **QUANTITY AND QUALITY OF WATER INVOLVED** - For each type of water use indicated in Block 9, provide the source of water, the estimated quantity to be used in cubic metres per day, and the periods during which water will be extracted.

Type of Water Use indicated in Block 9	Name of water source	Estimated quantity of water to be used in cubic metres per day	Periods during which water will be extracted
For an undertaking other than a Power undertaking and for any use of water	Unnamed streams or lakes in study region	0.010 m <sup>3</sup> /day	1-31 July 2017

less than 50 m3 per day.			
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**11. TYPE OF DEPOSIT OF WASTE PROPOSED** - Check the box that applies to the type of deposit of waste proposed. If none of the deposits of waste listed below apply to the proposed deposit of waste, an application for a water licence will be required. See the NWB's Guide 4 – Completing and Submitting a Water Licence Application for a New Licence.

- ☐ For an Industrial undertaking, for an activity related to hydrostatic testing or cleaning of storage tanks and pipelines, and for any deposit of waste resulting from hydrostatic testing or cleaning of unused storage tanks or pipelines.
- ☐ For an Industrial undertaking, for an activity related to quarrying and gravel washing, and for any deposit of waste that is not deposited to surface water and that results from quarrying or gravel washing above the ordinary high water mark.
- ☐ For a Mining undertaking, for an activity related to exploratory work, any deposit of sewage to a sump.
- ☐ For a Power undertaking, any deposit of sewage to a sump.
- ☐ For an Agricultural undertaking, any deposit of sewage to a sump.
- ☐ For a Recreation undertaking, any deposit of sewage to a sump.
- ☒ For any Other type of undertaking not listed above, other than Municipal, any deposit of sewage to a sump.

**12. QUANTITY AND QUALITY OF WASTE INVOLVED** – For each type of waste indicated in Block 11, describe the quantity in cubic metres/day, measures to avoid or mitigate adverse impacts, and periods of deposition.

Type of Waste indicated in Block 11	Quantity to be deposited in cubic metres per day	Measures to avoid or mitigate any adverse impacts	Periods during which waste will be deposited
For any Other type of undertaking not listed above, other than Municipal, any deposit of sewage to a sump. (Greywater)	0.010 m <sup>3</sup> /day	Will dump grey water at least 50 m from water sources	1-31 July 2017
For any Other type of undertaking not listed above, other than Municipal, any deposit of sewage to a sump.	Minimal (two people)	We will use the toilet facilities at	1-31 July 2017

(Sewage)

### 13. SIGNATURE

I, Troy McMillan (print name), certify that the information given on this form is, to the best of my knowledge, correct and complete.

☒ Yes

☐ No

OR

I, \_\_\_\_\_ (print name), as an authorized representative of the Applicant, \_\_\_\_\_, certify that the information given on this form is, to the best of my knowledge, correct and complete.

☒ Yes

☐ No

I certify that the Nunavut Planning Commission's land use planning requirements under Article 11 of the Nunavut Land Claims Agreement have been met.

☒ Yes

☐ No

I certify that the Nunavut Impact Review Board's development impact review requirements under Article 12 of the NLCA have been met.

☒ Yes

☐ No

I certify that the proposed water use is of a type set out in column 2 of Schedule 2 of the Regulations that is further specified by column 3, in respect of an undertaking set out in column 1. See list in Block 9.

☒ Yes

☐ NA

☐ No

I certify that the proposed deposit of waste is an activity that is set out and then further specified in columns 2 and 3 of Schedule 3 of the Regulations, in respect of an undertaking that is set out in column 1 of Schedule 3. See list in Block 11.

☒ Yes

☐ NA

☐ No

I certify that the proposed water use or deposit of waste will not substantially affect the quality, quantity or flow of the watercourse whose waters are used.

☒ Yes

☐ No

I certify that the proposed water use or deposit of waste will not substantially affect the quality, quantity or flow of waters flowing through Inuit Owned Lands.

☒ Yes

☐ No

I certify that the proposed water use or deposit of waste will not affect the use of waters by a person who would be entitled to compensation under sections 58 or 60 of the Nunavut Waters Nunavut Surface Rights Tribunal Act (Act) if their use of these waters were to be adversely affected by an applicant for a licence.



☒ Yes

☐ No

I certify that a licence is not required for another use of water, or deposit of waste in respect of the proposed undertaking.

☒ Yes

☐ No

I have read and agree to comply with the following conditions outlined in sections 4(3), 5(4), 5(5) and 6 of the Nunavut Waters Regulations:

1. In the case of an applicant who has a mineral right and who intends to use waters or deposit waste in relation to that right, the applicant shall respect the priority conferred on Inuit by section 62 of the *Act* as if that applicant had a licence for the use or deposit.
2. Measures must be taken prior to using water to minimize any alteration to the bed or banks of a watercourse whose waters are to be used, and the measures shall be maintained during the operation of the undertaking.
3. No waste is to be deposited to surface water or within 31 metres of the ordinary high water mark of any body of water.
4. The waste shall not contain more than 15 milligrams per litre of petroleum or petroleum product and must not have a visible hydrocarbon sheen.
5. Prior to the closure or abandonment of the undertaking or end of the period authorized for the use of water or deposit of waste without a licence, whichever occurs first, the site shall be restored — to the extent practicable — to the state in which it was before the water was used or the waste was deposited.<sup>a</sup>
6. An applicant who is authorized under the Regulations to use waters or deposit waste without a licence shall:
  - a. maintain accurate and detailed books and records of:
    - i. the quantity of water, in cubic metres, used each day,
    - ii. the quantity, in cubic metres, of waste deposited each day,
    - iii. the type of waste deposited each day,
    - iv. where the waste is deposited,
    - v. the concentration of the substance, or substances, in the deposited solid or liquid that has the effect of making the deposit waste,
    - vi. the methodology used to calculate or determine the information referred to in items (i) to (iv), and
    - vii. the measures that were taken to avoid or mitigate any adverse impacts of the deposit of waste.
  - b. keep the books and records on the site of the undertaking during the period of its operation and make them available during that period to an inspector on request;
  - c. submit to the Board a report containing a summary description and supporting photographs of the restoration of the site of the undertaking within 30 days after the earliest of (i) the day on which the undertaking is closed or abandoned, and (ii) the last day of the period authorized for the use or deposit without a licence;<sup>b</sup> and
  - d. keep the books and records for two years after submitting the report describing the restoration of the site of the undertaking.

Notes:

a) A site need not be restored prior to the end of the period authorized for the water use or deposit of waste without a licence, as required by Item 5, if the Board issues a licence for the use of water or deposit of waste on that site prior to the end of that period.

b) An applicant need not submit the report referred to in Item 6 (c), to the Board if the applicant obtains the Board's approval for a use of water or deposit of waste without a licence, or a licence for a use of water or deposit of waste, on the same site within thirty (30) days after the last day of the period authorized for the use or deposit.

☒ Yes

☐ No

I understand that any approval granted by the Board for the use of water or deposit of waste without a licence will be authorized for a period of one year after the day on which the Board approves the Application. The use or deposit is not authorized until the Board approves the Application and it is only valid as long as the applicant is in compliance with the conditions set out in the declaration above.

☒ Yes

☐ No

I understand that if I have answered "No" to any of the above statements a water licence is required from the



Nunavut Water Board prior to the use of water or deposit of waste.

☒ Yes

☐ No

R. Troy McMullin  
Name (Print)

Research Scientist  
Title (Print)

  
Signature

27 Feb. 2017  
Date