



Application for Water Licence Renewal

Document Date: April 2013

Application Submission Date: 05/29/15
Month/Day/Year

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NUNAVUT IMALIRIYIN KATIMAYIT
NUNAVUT WATER BOARD
OFFICE DES EAUX DU NUNAVUT

DOCUMENT MANAGEMENT

Original Document Date: April 2010

DOCUMENT AMENDMENTS

	Description	Date
(1)	Updated for public distribution as separate document from NWB Guide 7	June 2010
(2)	Updated NWB logos and reformatted table to allow rows to break across page	May 2011
(3)	New NWB logo and request for background information	April 2013
(4)		
(5)		
(6)		
(7)		
(8)		
(9)		
(10)		



2. LICENSEE REPRESENTATIVE CONTACT INFORMATION – If different from Block 1.

Name:

Address:

Phone: _____

Fax: _____

e-mail: _____

(Attach authorization letter.)

3. NAME OF PROJECT

Is the name of the project the same as that considered in the existing water licence?

☒ Yes ☐ No

Indicate the name of the project including the name of the location: Northern Ellesmere Ice Shelves, Epishelf Lakes and Climate Impacts (Milne Fiord Area, Ellesmere Island)

4. LOCATION OF UNDERTAKING

Is the location of the undertaking the same as that considered in the existing water licence?

☒ Yes ☐ No

Project Extents

NW:	Latitude: (82.9N)	Longitude: (82.6W)
NE:	Latitude: (82.9N)	Longitude: (79.6W)
SE:	Latitude: (81.7N)	Longitude: (79.6W)
SW:	Latitude: (81.7N)	Longitude: (82.6W)

Camp Location(s)

Latitude: (82.4629N)	Longitude: (80.7294W)
Latitude: (82.703N)	Longitude: (81.309W)
Latitude: (82.4488N)	Longitude: (80.1699W)

5. MAP

Are the locations of the main components of the undertaking the same as those considered in the existing licence?

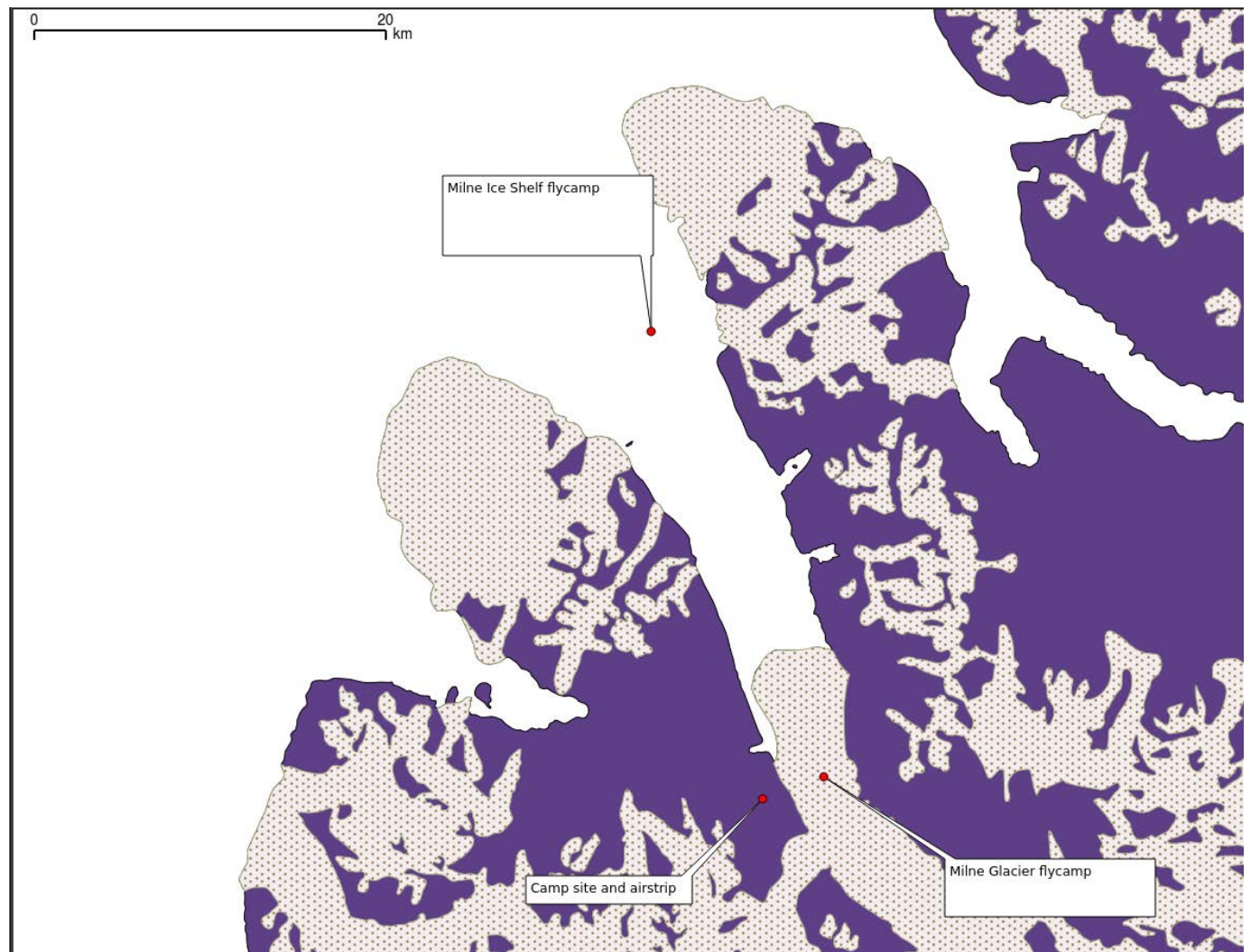
☒ Yes ☐ No

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

NTS Map Sheet No.: __340F__

Map Name: __Yelverton Bay__

Map Scale: __1:250:000__



6. NATURE OF INTEREST IN THE LAND

Is the nature of the interest in the land the same as that considered in the existing water licence?

☒ Yes ☐ No

Check any of the following that are applicable to the proposed undertaking (at least one box under the 'Surface' header must be checked).

Sub-surface

☐ Mineral Lease from Nunavut Tunngavik Incorporated (NTI)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Mineral Lease from Indian and Northern Affairs Canada (INAC)
Date (expected date) of issuance: _____ Date of expiry: _____

Surface

☐ Crown Land Use Authorization from Indian and Northern Affairs Canada (INAC)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Inuit Owned Land (IOL) Authorization from Kitikmeot Inuit Association (KIA)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ IOL Authorization from Kivalliq Inuit Association (KivIA)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ IOL Authorization from Qikiqtani Inuit Association (QIA)
Date (expected date) of issuance: _____ Date of expiry: _____

☐ Commissioner's Land Use Authorization
Date (expected date) of issuance: _____ Date of expiry: _____

☒ Other Nunavut Research Institute Scientific Research License

Date (expected date) of issuance: January 2015 Date of expiry: 2015-12-31

Is the name of the entity(s) holding authorizations the same as that considered in the existing water licence?

☒ Yes ☐ No

If No, a licence assignment must be completed and approved by the NWB.

Name of entity(s) holding authorizations: University of Ottawa

7. NUNAVUT PLANNING COMMISSION (NPC) DETERMINATION

Is the undertaking located in the same land use planning area as that considered in the existing licence?

☒ Yes ☐ No

Indicate the land use planning area in which the project is located.

☒ North Baffin
☐ South Baffin
☐ Akunnig

☐ Keewatin
☐ Sanikiluaq
☐ West Kitikmeot

Was a land use plan conformity determination required from NPC prior to the issuance of the existing water licence?

☐ Yes ☒ No

If Yes, indicate date issued and attach copy. _____

Does the proposed renewal change the original NPC conformity determination or the need to obtain one?

☐ Yes ☒ No

If Yes, indicate date issued (or expected) and attach a copy. _____
If No, provide written confirmation from NPC confirming that a land use plan conformity review is not required.

8. NUNAVUT IMPACT REVIEW BOARD (NIRB) DETERMINATION

Was a screening determination required from NIRB prior to the issuance of the existing water licence?

☐ Yes ☒ No

If Yes, indicate date issued and attach copy. _____

Does the proposed renewal change the original NIRB screening determination or the need to obtain one?

☐ Yes ☒ No

If Yes, indicate date issued (or expected) and attach a copy. _____
If No, provide written confirmation from NIRB confirming that a screening determination is not required.

9. DESCRIPTION OF UNDERTAKING

Is the description of the undertaking the same as that considered in the existing water licence?

☒ Yes ☐ No

List and attach plans and drawings or project proposal.

See attached project description

10. OPTIONS

Are the alternative methods and locations that were considered to carry out the project the same as those considered in the existing water licence?

☒ Yes ☐ No

Provide a brief explanation of the alternative methods or locations that were considered to carry out the project.

11. CLASSIFICATION OF PRIMARY UNDERTAKING

Is the primary undertaking the same as that considered in the existing water licence?

☒ Yes ☐ No

Indicate the primary classification of undertaking by checking one of the following boxes.

- | | |
|---|---|
| <input type="checkbox"/> Industrial | <input type="checkbox"/> Agricultural |
| <input type="checkbox"/> Mining and Milling (includes exploration/drilling/exploration camps) | |
| <input type="checkbox"/> Conservation | |
| <input type="checkbox"/> Municipal (includes camps/lodges) | <input type="checkbox"/> Recreational |
| <input type="checkbox"/> Power | <input checked="" type="checkbox"/> Miscellaneous (describe below):
<u>Scientific Research</u> |

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

12. WATER USE

Is the type(s) of water use(s) the same as that considered in the existing water licence?

☒ Yes ☐ No

Check the appropriate box(s) to indicate the type(s) of water use(s) being applied for.

- | | |
|--|---|
| <input checked="" type="checkbox"/> To obtain water for camp/ municipal purposes | |
| <input type="checkbox"/> To obtain water for industrial purposes | <input type="checkbox"/> To divert a watercourse |
| <input type="checkbox"/> To cross a watercourse | <input type="checkbox"/> To modify the bed or bank of a watercourse |
| <input type="checkbox"/> To alter the flow of, or store water | <input type="checkbox"/> Flood control |
| <input type="checkbox"/> Other: _____ | |

13. QUANTITY OF WATER INVOLVED

Is the source of water the same as that considered in the existing licence?

☒ Yes ☐ No

Name of water source(s): Milne Ice shelf, glacier and small stream next to the camp on land
(show location(s) on map)

Is the quality of the water source and its available capacity the same as that considered in the existing licence?

☒ Yes ☐ No

Describe the quality of the water source(s) and the available capacity(s): The stream next to the airstrip has freshwater in plentiful supply, the Milne Glacier and Ice shelf have meltponds that contain ample freshwater

Is the overall estimated quantity of water to be used the same as that considered in the existing licence?

☒ Yes ☐ No

Provide the overall estimated quantity of water to be used: 0.025 m³/day

Are the quantity(s) of water to be used from each source the same as those considered in the existing licence?

☒ Yes ☐ No

Provide the estimated quantity(s) of water to be used from each source: < 1 m³ per year

Are the quantity(s) of water to be used for each purpose the same as those considered in the existing licence?

☒ Yes ☐ No

Provide the estimated quantities to be used for each purpose (camp, drilling, etc.): _____

< 1 m³ per year

Are the method(s) of extraction the same as those considered in the existing licence?

☒ Yes ☐ No

Describe the method(s) of extraction: scooped with a plastic jug into a 25 L container

Are the quantity(s) of water returned to source(s) the same as those considered in the existing licence?

☒ Yes ☐ No

Estimated quantity(s) of water returned to source(s): 0.01 m³/day

Are the quality(s) of water(s) returned to source(s) the same as those considered in the existing licence?

☒ Yes ☐ No

Describe the quality(s) of water(s) returned to source(s): urine and greywater will be disposed of on the ice or land. No waste water will be returned to the stream

14. WASTE

Are the type(s) of waste(s) to be generated and/ or deposited the same as those considered in the existing licence?

☒ Yes ☐ No

Check the appropriate box(s) to indicate the types of waste(s) generated and deposited.

☒ Sewage

☒ Solid Waste

☐ Hazardous

☐ Bulky Items/Scrap Metal

☐ Animal Waste

☐ Other (describe): _____

☐ Waste oil

☒ Greywater

☐ Sludges

☐ Contaminated soil and/or water

15. QUANTITY AND QUALITY OF WASTE INVOLVED

Are the quantity(s) of the types of wastes involved the same as those considered in the existing licence?

☒ Yes ☐ No

Are the composition(s) of the types of wastes involved the same as those considered in the existing licence?

☒ Yes ☐ No

Are the method(s) of treatment for the types of waste involved the same as those considered in the existing licence?

☒ Yes ☐ No

Are the method(s) of disposal for the types of waste involved the same as those considered in the existing licence?

☒ Yes ☐ No

For each type of waste indicated in Block 14, describe its composition, quantity in cubic meters/day, method of treatment and method of disposal.

Type of Waste	Composition	Quantity Generated	Treatment Method	Disposal Method
Greywater	Dishwater	10 L per day	None	Dispose of near camp on snow or in sump
Sewage	Urine	6 L per day	None	On ground
Solid waste	Feces	4 kg per day	N/A	Removed from site – flown out on Twin Otter to Resolute Bay

16. OTHER AUTHORIZATIONS

In addition to the sub-surface and surface land use authorizations provided in Block 6, are the same authorizations required as considered in the existing licence?

☒ Yes ☐ No

For each provide the following:

Authorization: _____ N/A _____

Administering Agency: _____

Project Activity: _____

Date (expected date) of issuance: _____ Date of expiry: _____

17. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES

Are predicted environmental impacts of the undertaking and proposed mitigation measures the same as those considered in the existing water licence?

☒ Yes ☐ No

Describe direct, indirect, and cumulative impacts related to water and waste.

None

18. WATER RIGHTS OF EXISTING AND OTHER WATER USERS

Are the effects of the undertaking on any known persons or property including those that hold licences for water use in precedence to the application, domestic users, in-stream users, authorized waste depositors, owners of property, occupiers of property, and/or holders of outfitting concessions, registered trapline holders, and holders of other rights of a similar nature, the same as those considered in the existing water licence?

☒ Yes ☐ No

Provide the names, addresses and nature of use for any known persons or properties that may be adversely affected by the proposed undertaking, including those that hold licences for water use in precedent to the application, domestic users, in-stream users, authorized waste depositors, owners of property, occupiers of property, and/or holders of outfitting concessions, registered trapline holders, and holders of other rights of a similar nature.

Advise the Board if compensation has been paid and/or agreement(s) for compensation have been reached with any existing or other users.

N/A

19. INUIT WATER RIGHTS

Are the effects of the undertaking on the quality, quantity or flow of waters flowing through Inuit Owned Land (IOL) the same as those considered in the existing water licence?

☒ Yes ☐ No

Advise the Board of any substantial affect of the quality, quantity or flow of waters flowing through Inuit Owned Land (IOL), and advise the Board if negotiations have commenced or an agreement to pay compensation for any loss or damage has been reached with one or more Designated Inuit Organization (DIO).

Our project is not on Inuit Owned Land

20. CONSULTATION - Provide a summary of any consultation meetings including when the meetings were held, where and with whom. Include a list of concerns expressed and measures to address concerns.

Telephone conversations were made along with followup emails to HTA and Hamlet staff in Resolute Bay and Grise Fiord in December 2014 and January 2015. No concerns have been communicated to date. Community organizations review our plans annually as part of the NRI licensing and reporting procedure.

21. SECURITY INFORMATION

Is the financial security assessment the same as that considered in the existing water licence?

☒ Yes ☐ No

Is the estimate of the total financial security for final reclamation the same as that considered in the existing water licence?

☒ Yes ☐ No

Provide an estimate of the total financial security for final reclamation equal to the total outstanding reclamation liability for land and water combined sufficient to cover the highest liability over the life of the undertaking. Estimates of reclamation costs must be based on the cost of having the necessary reclamation work done by a third party contractor if the operator defaults. The estimate must also include contingency factors appropriate to the particular work to be undertaken.

Where applicable, the financial security assessment should be prepared in a manner consistent with the principals respecting mine site reclamation and implementation found in the *Mine Site Reclamation Policy for Nunavut*, Indian and Northern Affairs Canada, 2002.

This is question is not applicable. As outlined in #17, we anticipate no negative environmental impacts from our operations

22. FINANCIAL INFORMATION

Is the statement of financial security the same as that considered in the existing water licence?

☒ Yes ☐ No

Provide an updated statement of financial security.

If the applicant is a business entity please answer the questions below:

Is the list of the officers of the company the same as those considered in the existing water licence?

☒ Yes ☐ No

Provide a list of the officers of the company.

The organization is a university (University of Ottawa), not a company, so names of officers are not relevant. The University of Ottawa is the largest bilingual university in North America, with annual operating income of \$1,112,800,000 (2012-2013). It is established under the *University of Ottawa Act, 1965*. More information at <http://www.uottawa.ca/governance/home.html>

Is the Certificate of Incorporation or evidence of registration of the company name the same?

☒ Yes ☐ No

Attach a copy of the Certificate of Incorporation or evidence of registration of the company name.

The university is established under the *University of Ottawa Act, 1965*. More information at <http://www.uottawa.ca/governance/home.html>

23. STUDIES UNDERTAKEN TO DATE

List and attach updated studies, reports, research etc.

PDF copies of all publications undertaken since research started at the field site can be downloaded from <http://cryospheric.org/publications/>. See, for example:

- White, A., Mueller, D. and Copland, L. 2015. Reconstructing hydrographic change in Petersen Bay, Ellesmere Island, Canada, inferred from SAR imagery. *Remote Sensing of Environment*, 165, 1-13.
- White, A., Copland, L., Mueller, D. and Van Wyche, W. 2015. Assessment of historical changes (1959-2012) and the causes of recent break-ups of the Petersen ice shelf, Nunavut, Canada. *Annals of Glaciology*, 56(69), 65-76.
- Van Wyche, W., Burgess, D.O., Gray, L., Copland, L., Sharp, M., Dowdeswell, J. and Benham, T. 2014. Glacier velocities and dynamic ice discharge from the Queen Elizabeth Islands, Nunavut, Canada. *Geophysical Research Letters*, 41(2), 484-490
- Mortimer, C., Copland, L. and Mueller, D. (2012): Volume and area changes of the Milne Ice Shelf, Ellesmere Island, Nunavut, Canada, since 1950. *Journal of Geophysical Research – Earth Surface*, 117, F04011
- Pope, S., Copland, L. and Mueller, D. (2012): Loss of multiyear landfast sea ice from Yelverton Bay, Ellesmere Island, Nunavut, Canada. *Arctic, Antarctic, and Alpine Research*, 44(2), 210-221

Provide a compliance assessment and status report including a response to any inspector's reports. The licensee must contact the NWB for licence specific direction in completing the assessment and report.

There has not been an inspector's visit to the field site since the original NWB license was issued. All activities proposed in the original NWB application have been undertaken, and everything is in compliance with NWB regulations and the license conditions.

If in non-compliance, a licence may not be issued until compliance is achieved. If in non-compliance, attach plans/reports for consideration. Application will not be processed if significant issues of non-compliance exist.

24. PROPOSED TIME SCHEDULE

Is the time schedule for all phases of development (construction, operations, closure and post closure) the same as that considered in the existing licence?

☒ Yes ☐ No

Indicate the proposed start and completion dates for each applicable phase of development (construction, operation, closure, and post closure).

Construction

Proposed Start Date: _____ Proposed Completion Date: _____
(month/year) (month/year)

Operation

Proposed Start Date: _____ Proposed Completion Date: _____
(month/year) (month/year)

Closure

Proposed Start Date: _____ Proposed Completion Date: _____
(month/year) (month/year)

Post - Closure

Proposed Start Date: _____ Proposed Completion Date: _____
(month/year) (month/year)

For each applicable phase of development indicate which season(s) activities occur.

Construction

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☐ All season

Operation

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☐ All season

Closure

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☐ All season

Post - Closure

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☐ All season

Application is for establishment of a small temporary scientific camp in the spring (April/May) and/or summer (July/August) for up to ~2 weeks. Camp will typically be for four people, with 4 sleeping tents, 1 gear tent and 1 kitchen tent. Tent construction and closure will take ~4 hours each on the days that we arrive and depart via Twin Otter or helicopter. Camp is established and removed for every visit.

25. PROPOSED TERM OF LICENCE

On what date does the existing licence expire? May 8, 2015

Indicate the proposed term of the renewal (maximum of 25 years): 10

Requested date of renewal issuance: 06/2015 Requested Expiry Date: 06/2025
(month/year) (month/year)

(The requested date of renewal issuance must be at least three (3) months from the date of application for a type B water licence and at least one (1) year from the date of application for a type A water licence, to allow for processing of the water licence application. These timeframes are approximate and do not account for the time to complete any pre-licensing land use planning or development impact requirements, time for the applicant to prepare and submit a water licence application in accordance with any project specific guidelines issued by the NWB, or the time for the applicant to respond to requests for additional information. See the NWB's *Guide 5: Processing Water Licence Applications* for more information)

26. ANNUAL REPORTING

Is the annual report template expected to be the same as that considered in the existing licence?

☒ Yes ☐ No

If not using the NWB's *Standardized Form for Annual Reporting*, provide details regarding the content of annual reports and a proposed outline or template of the annual report.

27. CHECKLIST

The following must be included with the application for renewal for the water licensing process to begin.

Completed Application for Water Licence Renewal form.

☒ Yes ☐ No If no, date expected _____

Updated plans, including designs and reports (see Block 23).

☒ Yes ☐ No If no, date expected _____

Updated security assessment (see Block 21).

☒ Yes ☐ No If no, date expected _____

Updated financial statement (see Block 22).

☒ Yes ☐ No If no, date expected _____

Compliance Assessment / Status Report (see Block 23).

☒ Yes ☐ No If no, date expected _____

English Summary of Renewal Application.

☒ Yes ☐ No If no, date expected _____

Inuktitut and/or Inuinnaqtun Summary of Renewal Application.

☒ Yes ☐ No If no, date expected _____

Application fee of \$30.00 CDN (Payee Receiver General for Canada).

☒ Yes ☐ No If no, date expected paid by credit card May 26, 2015

Water Use Fee Deposit of \$30.00 CDN (Payee Receiver General for Canada). The actual water use fee will be calculated by the NWB based upon the amount of water authorized for use in accordance with the Regulations at the time of issuance of the licence.

☒ Yes ☐ No If no, date expected paid by credit card May 26, 2015

28. SIGNATURE

I, Luke Copland (print name)

certify that the application requires no changes to water use or waste disposal as previously authorized and that the information given on this form is, to the best of my knowledge, correct and complete.



Signature

2015/05/28
Date