

Cover Page

This document is reproduced electronically and contains 40 pages including the cover page. The electronic document is contained in the following PDF files:

1. Gilchrist Belcher Islands Water Licence Application 2011
2. Gilchrist Belcher Islands Maps 2011
3. Gilchrist Spill Contingency Plan 2011
4. Gilchrist Sanikiluaq Letter of Support 2011

List of documents included in this application:

	Description
(1)	Nunavut Water Board Application in English
(2)	Executive Summary in English
(3)	Executive Summary in Inuktitut
(4)	Letter of authorization
(5)	Map of region
(6)	Map of camp site
(7)	Spill Contingency Plan
(8)	Material Safety Data Sheets + Nunavut Spill Form
(9)	Sanikiluaq HTA support letter
(10)	



General Water Licence Application
(Application for a new Water Licence)

April 2010

P.O. BOX 119
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NUNAVUT IMALIRIYIN KATIMAYINGI
NUNAVUT WATER BOARD
OFFICE DES EAUX DU NUNAVUT

DOCUMENT MANAGEMENT

Original Document Date: April 2010

DOCUMENT AMENDMENTS

	Description	Date
(1)		
(2)		
(3)		
(4)		
(5)		
(6)		
(7)		
(8)		
(9)		
(10)		



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GENERAL WATER LICENCE APPLICATION (APPLICATION FOR NEW WATER LICENCE)

The applicant is referred to the NWB's Guide 4: Guide to Completing and Submitting a Water Licence Application for a New Licence for more information about this application form.

LICENCE NO: (for NWB use only)	
1. APPLICANT (PROPOSED LICENSEE) CONTACT INFORMATION (name, address) Grant Gilchrist Environment Canada NWRC, Carleton University 1125 Colonel By Dr. Ottawa, ON, K1A 0H3 Phone: ____ (613) 998-7364 Fax: ____ (613) 998-0458 e-mail: ____ grant.gilchrist@ec.gc.ca ____	2. APPLICANT REPRESENTATIVE CONTACT INFORMATION if different from Block 1 (name, address) Amie Black Environment Canada NWRC, Carleton University 1125 Colonel By Dr. Ottawa, ON, K1A 0H3 Phone: ____ (613) 998-8523 ____ Fax: ____ (613) 998-0458 ____ e-mail: ____ amie.black@ec.gc.ca ____ (Attach authorization letter.)
3. NAME OF PROJECT (including the name of the project location) Detecting Avian Cholera in the Hudson Bay Common Eider (<i>Somateria mollissima sedentaria</i>) in the Belcher Island Archipelago, Nunavut	
4. LOCATION OF UNDERTAKING Project Extents NW: Latitude: (55 ° 55 ' " N) Longitude: (80 ° 00 ' " W) NE: Latitude: (55 ° 55 ' " N) Longitude: (79 ° 45 ' " W) SE: Latitude: (55 ° 45 ' " N) Longitude: (79 ° 45 ' " W) SW: Latitude: (55 ° 45 ' " N) Longitude: (80 ° 00 ' " W) Camp Location(s) Latitude: (55 ° 49 ' 21 " N) Longitude: (79 ° 53' 55 " W)	
5. MAP - Attach a topographical map, indicating the main components of the undertaking. NTS Map Sheet No.: _33 M13_ Map Name: Freakly Point Map Scale: _1:50 000	

6. NATURE OF INTEREST IN THE LAND - 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: _____

X IOL Authorization from Qikiqtani Inuit Association (QIA)

Date (expected date) of issuance: __25 Feb 2009 Date of expiry: __28 Feb 2011_____

☐ Commissioner's Land Use Authorization

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

☐ Other: _____

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

Name of entity(s) holding authorizations:

_____ Grant Gilchrist/Amie Black_____

7. NUNAVUT PLANNING COMMISSION (NPC) DETERMINATION

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

☐ North Baffin

x South Baffin

☐ Akunnig

☐ Keewatin

☐ Sanikiluaq

☐ West Kitikmeot

Is a land use plan conformity determination required?

☐ Yes

X No

If Yes, indicate date issued and attach 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

Is an Article 12 Part 4 screening determination required?

X Yes

☐ No

If Yes, indicate date issued and attach copy ____ In progress _____

If No, provide written confirmation from NIRB confirming that a screening determination is not required.

9. DESCRIPTION OF UNDERTAKING – List and attach plans and drawings or project proposal.

See attached.

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

This area is one of the few places that support wildlife during the arctic winter. No other location is relevant to our study.

11. CLASSIFICATION OF PRIMARY UNDERTAKING - Indicate the primary classification of undertaking by checking one of the following boxes.

☐ Industrial

☐ Agricultural

☐ Mining and Milling (includes exploration/drilling/exploration camps)

X Conservation

☐ Municipal (includes camps/lodges)

☐ Recreational

☐ Power

☐ Miscellaneous (describe below):

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

Information in accordance with applicable Supplemental Information Guidelines (SIG) must be submitted with a New Water Licence Application. Indicate which SIG(s) are applicable to your application.

☐ Hydrostatic Testing

☐ Tannery

☐ Tourist / Remote Camp

☐ Landfarm & On-Site Storage of Hydrocarbon Contaminated Soil

☐ Onshore Oil and Gas Exploration Drilling

☐ Mineral Exploration / Remote Camp

☐ Advanced Exploration

☐ Mine Development

☐ Municipal

☐ General Water Works

☐ Power

12.	<p>WATER USE - Check the appropriate box(s) to indicate the type(s) of water use(s) being applied for.</p> <p>X To obtain water for camp/ municipal purposes</p> <table style="width: 100%;"> <tr> <td><input type="checkbox"/> To obtain water for industrial purposes</td> <td><input type="checkbox"/> To divert a watercourse</td> </tr> <tr> <td><input type="checkbox"/> To cross a watercourse</td> <td><input type="checkbox"/> To modify the bed or bank of a watercourse</td> </tr> <tr> <td><input type="checkbox"/> To alter the flow of, or store water</td> <td><input type="checkbox"/> Flood control</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> Other: _____</td> </tr> </table>	<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: _____					
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<input type="checkbox"/> Other: _____													
13.	<p>QUANTITY AND QUALITY OF WATER INVOLVED - For each type of water use indicated in Block 12, provide the source of water, the quality of the water source and available capacity, the estimated quantity to be used in cubic meters per day, method of extraction, as well as the quantities and qualities of water to be returned to source.</p> <p>Name of water source(s) (show location(s) on map): _____ Snow and ice near cabin and at hunting grounds, map location not applicable. Unnamed pond located approximately 100m from cabin.</p> <p>Describe the quality of the water source(s) and the available capacity: _____ _____ In the winter there is ample snow and ice for the minimal amount of water we require. During the summer we will use water from a nearby pond, which is of an unknown quality. _____</p> <p>Provide the overall estimated quantity of water to be used: _____ 0.05 _____ m³/day</p> <p>Provide the estimated quantity(s) of water to be used from each source: _____ Most water will be from snow and ice, a small amount from a nearby pond _____</p> <p>Indicate the estimated quantities to be used for each purpose (camp, drilling, etc.) _____ All water will be for camping purposes (washing dishes, drinking, etc)</p> <p>Describe the method of extraction(s): ____ Shovel _____</p> <p>Estimated quantity(s) of water returned to source(s) _____ 0 _____ m³/day</p> <p>Describe the quality of water(s) returned to source(s): _____ _____ 0 _____ _____</p>												
14.	<p>WASTE – Check the appropriate box(s) to indicate the types of waste(s) generated and deposited.</p> <table style="width: 100%;"> <tr> <td>X Sewage</td> <td><input type="checkbox"/> Waste oil</td> </tr> <tr> <td>X Solid Waste</td> <td>X Greywater</td> </tr> <tr> <td><input type="checkbox"/> Hazardous</td> <td><input type="checkbox"/> Sludges</td> </tr> <tr> <td><input type="checkbox"/> Bulky Items/Scrap Metal</td> <td><input type="checkbox"/> Contaminated soil and/or water</td> </tr> <tr> <td><input type="checkbox"/> Animal Waste</td> <td></td> </tr> <tr> <td colspan="2"><input type="checkbox"/> Other (describe): _____</td> </tr> </table>	X Sewage	<input type="checkbox"/> Waste oil	X Solid Waste	X Greywater	<input type="checkbox"/> Hazardous	<input type="checkbox"/> Sludges	<input type="checkbox"/> Bulky Items/Scrap Metal	<input type="checkbox"/> Contaminated soil and/or water	<input type="checkbox"/> Animal Waste		<input type="checkbox"/> Other (describe): _____	
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<input type="checkbox"/> Other (describe): _____													

- 15. QUANTITY AND QUALITY OF WASTE INVOLVED** – 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
Sewage		2L/day	None	Sump >150m from high tide line, where possible
Greywater		0.05m ³ /day	None	Sump >150m from high tide line, where possible
Solid Waste		<10lbs/day	None	Municipal landfill

- 16. OTHER AUTHORIZATIONS** – In addition to the sub-surface and surface land use authorizations provided in Block 6, indicate any other authorizations required in relation to the proposed undertaking. For each provide the following:

Authorization: ☐ Land Use permit_____

Administering Agency: ☐ Qikiqtani Inuit Association_____

Project Activity: ☐ Cabin use and travel on land_____

Date (expected date) of issuance: ☐ Feb 25 2009 Date of expiry: Feb 28, 2011 (will be renewed)

Authorization: ☐ CWS Scientific Permit_____

Administering Agency: ☐ Canadian Wildlife Service

Project Activity: ☐ Scientific research involving birds_____

Date (expected date) of issuance: late ☐ January_____ Date of expiry: March 31, 2013_____

Authorization: ☐ Animal Care Approval_____

Administering Agency: ☐ Environment Canada

Project Activity: ☐ Scientific research involving birds_____

Date (expected date) of issuance: ☐ Dec 8 2010_____ Date of expiry: March 25, 2011 _____

<p>Authorization: ___Nunavut Scientific Permit_____</p> <p>Administering Agency: ___Nunavut Department of Environment_____</p> <p>Project Activity: ___Scientific research involving birds_____</p> <p>Date (expected date) of issuance: late _January____ Date of expiry: March 31, 2011 _____</p>	
17.	<p>PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES - Describe direct, indirect, and cumulative impacts related to water and waste.</p> <p>We expect our impact to be minimal as we are a small group and are not using a large amount of dangerous materials. We will be using a small amount of gasoline, kerosene, and white gas. We have a spill contingency plan in place, and spill kits available should a spill occur.</p> <p>We will be depositing grey water and sewage at the site in a sump located > 150m away from high tide marks. The small number of people involved with the project and the large area that we will be covering, should allow us to minimize our impact on water resources in the area.</p>
18.	<p>WATER RIGHTS OF EXISTING AND OTHER USERS OF WATER</p> <p>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.</p> <p>Advise the Board if compensation has been paid and/or agreement(s) for compensation have been reached with any existing or other users.</p> <p>We do not know of interested parties that might be impacted by our work.</p>
19.	<p>INUIT WATER RIGHTS</p> <p>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).</p> <p>We do not believe our activities will affect the quality, quantity or flow of waters flowing through Inuit Owned Lands. We will be using a very small amount of water, mostly for drinking water and dish washing water.</p>
20.	<p>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.</p> <p>We meet with the Sanikiluaq HTA when we conduct our research. They are always aware of what we are doing, and have always provided support for our research.</p>

21. SECURITY INFORMATION

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.

Our project is very small-scale, so the cost of reclamation of the area around the cabin would be minimal.

22. FINANCIAL INFORMATION

Provide a statement of financial responsibility.

If the applicant is a business entity, provide a list of the officers of the company.

If the applicant is a business entity attach a copy of the Certificate of Incorporation or evidence of registration of the company name.

Our funding is provided by Environment Canada, a federal department. It is stable, and covers the cost of our research and associated activities.

23. STUDIES UNDERTAKEN TO DATE - List and attach copies of studies, reports, research, etc.

None.

24. PROPOSED TIME SCHEDULE – 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

X Winter ☐ Spring X Summer ☐ Fall ☐ All season

Closure

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☐ All season

Post - Closure

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☐ All season

25. PROPOSED TERM OF LICENCE

Number of years (maximum of 25 years): _____ 3 _____ years

Requested Date of Issuance: _____ Requested Expiry Date: _____
(month/year) (month/year)

(The requested date of 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 – 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 the water licensing process to begin.

Written confirmation from the NPC confirming that NPC's requirements regarding land use plan conformity have been addressed.

☐ Yes ☒ No If no, date expected ____Jan 2011____

Written confirmation from the NIRB confirming that NIRB's requirements regarding development impact assessment have been addressed.

☐ Yes ☒ No If no, date expected ____Feb 2011____

Completed General Water Licence Application form.

☒ Yes ☐ No If no, date expected _____

Information addressing Supplemental Information Guideline (SIG) , where applicable (see Block 11)

☐ Yes ☐ No If no, date expected _____

English Summary of Application.

☒ Yes ☐ No If no, date expected _____

Inuktitut and/or Inuinnaqtun Summary of Application.

☒ Yes ☐ No If no, date expected _____

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

☐ Yes ☒ No If no, date expected ____Exempt____

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 ____Exempt____

28. SIGNATURE

Grant Gilchrist

Research Scientist

Name (Print)

Title (Print)

Signature

Date

Executive Summary

We are proposing to conduct biological research in the southern Belcher Island Archipelago, Nunavut. We have a cabin located at 55° 49' 21" N 79° 53' 55"W which we hope to use as a base camp during our study.

We hope to work with local Inuit hunters to collect swabs, tissue, feather, and blood samples from eiders over-wintering in the polynyas and leads near Sanikiluaq. These samples will be analysed for avian cholera, and will indicate whether the disease has reached the wintering grounds of Common Eiders in Nunavut and possibly where the disease originated from. They will also inform us about what other breeding areas the disease may be carried to by infected birds over-wintering in the polynya.

Using snowmobiles, we hope to accompany hunters to their hunting grounds for 1-3 weeks between January and March. During this time, we would be collecting snow and ice to melt for drinking water and to wash dishes.

We also hope to conduct summer field work, the scope of which is yet to be determined. During that time we would use water from a nearby pond for dish washing, and drinking if it is determined to be safe for consumption. If not safe for consumption we would source our drinking water from the closest creek or transport it to the site from the town of Sanikiluaq.

The quantity of water we would use is minimal, approximately 0.05 m³/day. We would generate approximately 2L of sewage per day and 0.05 m³/day of grey water. Sewage and grey water will be disposed in sumps located > 150m above the high tide line where possible. We will also generate a minimal amount of solid waste, which we will transport back to Sanikiluaq to be disposed of in the municipal landfill.

Considering the small number of people involved in this project (5 or less), the short period of time we plan to be on the land (1-3 weeks), and the minimal amount of water we plan to use, we do not expect that our activities will negatively affect anyone. A small fuel spill is a possibility as we use kerosene, gas, and white gas in our daily activities. To mitigate the effects of a possible spill we have developed a spill contingency plan, and have a spill kit at the site.

We hope to conduct our winter field research for 1-3 weeks from January to March, dependent on licence and permit approvals.

