



Environment Canada  
Environnement Canada

National Wildlife Research Centre  
Carleton University  
1125 Colonel By Drive (Raven Road)  
Ottawa, ON K1A 0H3

NWB Manager of Licensing  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU X0B 1J0

February 13, 2015

Dear Manager:

Please find attached an application for water use without a license, a letter of support, and project descriptions in both English and Inuktitut for research conducted in Hudson Strait, Nunavut.

Please note the approval can be made out to Dr. Grant Gilchrist, however, any questions you have regarding this application can be directed to myself, Michael Janssen, [Michael.Janssen@ec.gc.ca](mailto:Michael.Janssen@ec.gc.ca) 613-991-9973.

Thank you very much for your consideration of this application, and please do not hesitate to contact us with any questions or concerns you may have.

Sincerely,

Michael Janssen  
Wildlife Technician  
Environment Canada

## **Arctic Seabird Research Program:**

### **Coastal Surveys of Common Eider Nesting Islands**

#### **Project Description**

##### **Common Eiders**

We are investigating multiple issues of particular management importance. The first issue is outbreaks of avian cholera. Avian cholera is one of the most lethal diseases of birds in North America and it appears to be a new disease for eiders in the North. Mass mortality events have been observed at several locations in Nunavut and Nunavik since 2004. Our objective is to determine the geographic extent of the outbreaks and to collect epidemiological data for laboratory analysis in order to help us to predict the severity and spread of disease.

The second issue that we are examining is predation of common eider nests by polar bears. Reports from multiple Inuit communities in Nunavut and Nunavik indicate that increasing numbers of bears are being seen on bird colonies during the nest incubation period. It has been hypothesized that one consequence of climate change is that polar bears will be forced ashore sooner because of early sea ice melt. Eider eggs are a potential alternative food source that bears can eat when they cannot capture seals. Our objective is to estimate nest predation rates by polar bears, determine the energetic benefits and limitations of this resource for bears, and examine the effects of increased nest predation on eider reproductive rates and population dynamics.

We are also interested in the amount of time it takes for Eider habitat to be created. Eiders nest preferentially in large colonies on islands with large amounts of vegetation. We believe they may actually have created these habitats over long time periods through nutrient deposition and there is concern that if they are forced to disperse from these current colonies the habitats they encounter will be sub-optimal, possibly leading to reduced reproductive output. We aim to investigate these nutrient inputs, their effects on island biodiversity, and how long they take to form optimal nesting habitat during this year's surveys.

Our research methodology emphasizes close collaboration with local communities. Our common eider surveys are boat-based and we hire local Inuit guides as boat captains and to assist with data collection. We rely extensively on local ecological knowledge for guidance on research protocols – such as where to sample and when. Ultimately, we hope to be able to work together with northern residents to quantify the effects that disease, shipping, and increased predation are having on seabirds, assess the potential for these pressures to intensify with further climatic warming, and identify management interventions to mitigate local and regional population declines.

## **Camp**

During portions of the surveys we will be camping on islands to facilitate sampling of areas far from town (Cape Dorset). We will camp at established campsites recommended by our local guides to reduce our impacts on the land. There will be between 4-8 Inuit guides and 3-8 others camping at each site. We will only be camping at each site for a few days before moving on. We will be using canvas tents provided by the guides for sleeping and cooking. We will have a small amount of white gas and fuel for the boats at each campsite. We have a spill response plan and will have a spill kit with us at all times.

Water is used for drinking and washing purposes only and will either be brought from town or obtained from small streams according to our guides. Human waste will be buried in a sump away from all water sources and backfilled before leaving camp. All other waste will be transported back to Cape Dorset and disposed of properly.

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Aiviq Hunters and Trappers Organization  
Po Box 300  
Cape Dorset, Nu  
X0A 0C0

Ph: 867-897-8978  
Fax: 867-897-8214

February-06-15

To Whom it may Concern

The Aiviq HTO met with the Environment Canada Seabird team on February 4, 2014  
As we do each year, We support their plans to research seabirds this summer and plans for future  
years in Hudson Strait. To Conduct surveys. We look forward to working with the seabird group  
and helping them to fine local peoples as part of the summer surveys. We also support plans to  
Build a small research station on Mill Island in 2015 with the help of Environment Canada and  
the Canadian Hight Arctic research station program.

Sincerely,

*Qavaroak Qatsiya*

Aiviq HTO



P.O. Box 119

GJOA HAVEN, NU X0B 1J0

TEL: (867) 360-6338

FAX: (867) 360-6369

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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.

<b>APPLICATION NO:</b> (for NWB use only)													
<b>1. APPLICANT CONTACT INFORMATION</b> (name, address) Grant Gilchrist National Wildlife Research Centre 1125 Colonel By Drive Ottawa, ON K1A 0H3  Phone: __ (613) 998-7364 _____ Fax: __ (613) 998-0458 _____ e-mail: __ Grant.Gilchrist@ec.gc.ca _____	<b>2. APPLICANT REPRESENTATIVE 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>  <b>4. Qikiqtani Inuit Association</b>													
<b>5. NAME OF PROJECT</b> (consistent with the name of the project issued by other regulatory agencies) Coastal surveys of Common Eider nesting islands along the South Baffin Coast.													
<b>6. LOCATION OF UNDERTAKING</b>  <b>Project Extents (decimal degree format)</b> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%;">NW</td> <td style="width: 40%; border-bottom: 1px solid black;">64.61221</td> <td style="width: 40%; border-bottom: 1px solid black;">-77.90739</td> </tr> <tr> <td>NE</td> <td style="border-bottom: 1px solid black;">64.61221</td> <td style="border-bottom: 1px solid black;">-72.90209</td> </tr> <tr> <td>SE</td> <td style="border-bottom: 1px solid black;">64.02182</td> <td style="border-bottom: 1px solid black;">-72.90209</td> </tr> <tr> <td>SW</td> <td style="border-bottom: 1px solid black;">64.02182</td> <td style="border-bottom: 1px solid black;">-77.90739</td> </tr> </table>		NW	64.61221	-77.90739	NE	64.61221	-72.90209	SE	64.02182	-72.90209	SW	64.02182	-77.90739
NW	64.61221	-77.90739											
NE	64.61221	-72.90209											
SE	64.02182	-72.90209											
SW	64.02182	-77.90739											

**Camp Location(s) (decimal degree format)**

64.03490

-73.58324

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

Hudson Strait Watershed

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

☐ Industrial

☐ Mining

☒ Conservation

☐ Municipal

☐ Agricultural

☐ Recreational

☐ Power

☐ Other: (describe)

See Appendix C of the Guide for descriptions of classifications of undertakings.

**8. 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.

Islands along the south coast of Baffin Island will be visited to study factors influencing Common Eider nesting dynamics. During portions of the surveys the field crew (5-15 people) will camp at established campsites on some islands to facilitate sampling. These camps will be light (canvas tents) and occupied for less than 1 week each. Drinking water will be brought from town and ocean water will be used for cooking and cleaning. Freshwater from small streams or ponds may be used for washing if available. Grey water will be disposed of in a sump away from flowing water that will be backfilled before leaving camp. Human waste will be deposited in another sump away from flowing water and backfilled before leaving camp.

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

Proposed Start Date: \_\_\_\_ July 2015 \_\_\_\_  
(Month/Year)

Proposed Completion Date: \_\_\_\_ August 2015 \_\_\_\_  
(Month/Year)

**10. 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.

☐



	<p>For an undertaking other than a Power undertaking and for a use of water related to the training of an intermittent watercourse.</p>
<input type="checkbox"/>	<p>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.</p>
<input type="checkbox"/>	<p>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.</p>
<input type="checkbox"/>	<p>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.</p>
<input type="checkbox"/>	<p>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.</p>
<input checked="" type="checkbox"/>	<p>For an undertaking other than a Power undertaking and for any use of water less than 50 m<sup>3</sup> per day.</p>

  

**11. 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
Washing	Sea water/Streams	<1	July 1 – August 15

  

**12. 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.

<input type="checkbox"/>	<p>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.</p>
<input type="checkbox"/>	<p>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.</p>

- ☐ 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.

**13. 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
Sewage – Human Waste	<0.05	Sump located > 100m away from water source and buried before leaving camp	July 1 – August 15
Grey Water – Dish Water	<0.1	Sump located > 100m away from water source and buried before leaving camp	July 1 – August 15
Solid Waste - Garbage	0	All garbage and other solid waste will be transported back to town (Cape Dorset) for disposal	July 1 – August 15

**14. SIGNATURE**

I, \_\_\_\_\_ Grant Gilchrist \_\_\_\_\_ (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

**Grant Gilchrist**  
Name (Print)

**Research Scientist**  
Title (Print)

  
Signature

**Feb 16, 2015**  
Date