

# FACSIMILE

**Name:** Ms. Phyllis Beaulieu  
**Organization:** Nunavut Water Board  
**Fax:** (867) 360-6369  
**Phone:**  
**From:** Michelle Johnson  
 Kitikmeot/Kivalliq Regional Coordinator  
 Department of Indian Affairs and Northern Development  
**Fax:** (867) 975-4560  
**Phone:** (867) 975-4548  
**Date:** July 9, 2002  
**Subject:** See Attached  
**Pages:** 28

Good morning,

This is the complete environmental assessment package for Cambridge Bay's water licence application. I've included the cover letter, screening report, and comments from INAC, DFO, EC, HC, and the Government of Nunavut Departments of Health, and Culture, Language, Elders and Youth.

Please contact me if you have any questions, thank you.



Michelle Johnson

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NUNAVUT WATER BOARD

SCANNED

2002/18/2002

REF. #

020709NWAB3CAM DIAND CENN Report-ILAE



Indian and Northern  
Affairs Canada  
www.inac.gc.ca

Affaires indiennes  
et du Nord Canada  
www.aic.gc.ca

Water Resources Division  
Qimugjuk Building  
P.O. Box 2200  
Iqaluit, Nunavut  
X0A 0H0

July 8, 2002

Your file - Votre référence  
NWB3CAM  
Our file - Notre référence

Ms. Phyllis Beaulieu  
Acting Licensing Administrator  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, Nunavut  
X0E 1J0

Dear Ms. Beaulieu:

Re: Cambridge Bay - Environmental Assessment

Pursuant to Section 5 of the Canadian Environmental Assessment Act (CEAA), the Department of Indian and Northern Affairs Canada (INAC) has completed an environmental assessment of the Hamlet of Cambridge Bay's water licence application.

The Project proposal was reviewed by INAC's Water Resources Management Division in collaboration with the Department of Fisheries and Oceans, Environment Canada, and Health Canada. In addition, comments were received from the Government of Nunavut Department of Health, and Culture, Language, Elders and Youth. Based on the results of the screening, INAC has concluded that the project is not likely to cause significant adverse environmental effects. The incorporation of appropriate conditions in the new water licence will help mitigate the current environmental effects of Cambridge Bay's waste disposal facilities. Suggested conditions are as follows:

Conditions Applying to Water Use:

- the past licence conditions are adequate and, given the records submitted by the Hamlet, the previous limit of 70,000 m<sup>3</sup>/day will be sufficient
- ensure compliance with the *Freshwater Intake End-of-Pipe Fish Screen Guideline* (DFO, 1995), available upon request from DFO

Canada

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**Conditions Applying to Waste Disposal: Solid Waste Disposal Site**

- install and maintain fencing to prevent the deposit of solid waste in the sewage lagoon
- assess contaminants in solid waste site (the Hamlet has been working with CG&T to secure funding for the installation and sampling of monitoring wells on the south side of the site), submit a report which summarizes the results and suggests remedial measures that incorporate progressive reclamation
- develop and implement an engineered site improvement plan to effectively separate the two waste streams, prevent mixing of sewage and solid waste site effluents, and ensure the safe handling and disposal of waste oil and other hazardous wastes
- submit plans to relocate the solid waste disposal site to the Nunavut Water Board (NWB) upon completion, it is expected that these plans will be reviewed when required as an amendment to this licence

**Conditions Applying to Waste Disposal: Sewage Lagoon**

- prepare and submit an Operation and Maintenance Plan that includes a procedure for the removal of solids from the sewage lagoon, maintenance of a one metre freeboard, and maintenance of the truck discharge chute such that erosion is prevented
- develop and implement an engineered site improvement plan which includes plans for the construction of a bagged toilet waste facility to receive the waste from outpost camps
- sample lagoon effluent annually (as a minimum), during periods of flow, as per the *Guidelines for the Discharge of Treated Municipal Wastewater in the Northwest Territories* (1992), the effluent must meet the following criteria:

Total Suspended Solids	120 mg/L
BOD	100 mg/L
Oil and Grease	no visible sheen
pH	6-9
Fecal Coliforms	10,000 CFU/100 mL
Ammonia	monitor only

**General Comments**

- the license should include requirements for the submission of an Operation and Maintenance Plan, Spill Contingency Plan, and Abandonment and Restoration Plan, the plans must include provisions for the water treatment and waste disposal facilities
- locate all waste, sewage contaminants, and fuel caches a minimum of 30 metres

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from the normal high water mark of any water body, and be sufficiently bermed or otherwise contained to ensure that deleterious substances do not enter any water body

- implement and maintain sediment and erosion control measures prior to, and during work to prevent sediment entry into the water during a spring thaw
- control all activities, including maintenance procedures and refueling, to prevent the entry of petroleum products or other deleterious substances into the water
- upon completion of work, all disturbed areas should be stabilized and re-vegetated as required, and restored to a pre-disturbed state
- no material should be left on the ice when there is potential for that material to enter the water (i.e. Spring break-up)
- ensure completion of appropriate training of municipal staff to ensure quality control in sampling collection and preparation
- report all spills of oil fuel, or other deleterious material immediately to the 24-Hour Spill Line at (867) 920-8130
- ensure that future activities avoid the known archaeological sites listed in the attachment from the Department of Culture, Language, Elders and Youth

The application states that the Hamlet plans to relocate the waste disposal site. It is expected that plans for the new facilities will be submitted to the Nunavut Water Board upon completion and these will be reviewed through a licence amendment. As a relocation of the waste disposal facilities will constitute a major change in this project, INAC will be required to complete an environmental screening to meet the requirements of CEAA.

The full CEAA screening report and relevant correspondence are attached, should you have any questions or comments, please do not hesitate to contact me at (867) 975-4548 or by e-mail at [johnsonmi@inac.gc.ca](mailto:johnsonmi@inac.gc.ca).

Sincerely,



Michelle Johnson  
Kitikmeot/Kivalliq Regional Coordinator

c.c.: Jordan DeGroot, Department of Fisheries and Oceans  
Paula Pacholek, Environment Canada  
Maria Ooi, Health Canada

**CEAA SCREENING FORM**  
**Indian and Northern Affairs Canada**  
**Nunavut Region**

**1. General File Information on Screening**

File Number: NWB3CAM  
Can be permit or licence number

\*FEAI LD. Reference Number: \_\_\_\_\_  
A number assigned by the Agency; to be inserted here upon receipt of number from Agency

\*Project Title: Cambridge Bay Water Licence  
Title of project

\*Alias Project Title: None  
Alternate project name (if any)

Proponent: Hamlet of Cambridge Bay  
Company/Applicant

Type of proponent: Municipal Government  
(e.g., Industry, Government, Other private)

\*Subject Descriptors: Inland Waters  
See Appendix A

\*EA Type: Screening  
Screening, Class Screening or Comprehensive Study

\*EA Start Date: June 6, 2002  
Date application received

Proposed Date of Activity: Open - 2002

\*EA Determination: 20 (1)(a) Water Licence Application may proceed (see attached letter for comments)  
Final screening determination from subsection 20(1) and section 23 - see # 13 of Screening Form and insert number here

Project Abandoned Yes N/A  
Explain reason for abandonment

\*EA Determination Date: July 8, 2002  
Date of screening decision

Follow-up program required:  
Annual INAC Water Licence Inspections

Yes/No If Yes, by NAP or proponent (or both)

\*Estimated Follow-up program termination date: N/A

\* Means this is a required field for a public registry

**2. Responsible Authority (RA) Information**

<b>*Lead RA and Screening Division:</b>	<u>INAC - Water Resources</u> <small>Division of DIAND (e.g. Water Resources, Land Administration, etc.)</small>
<b>Lead RA Contact:</b>	<u>Michelle Johnson, (867) 975-4548</u> <small>Name and telephone # of Regional Manager or Screener</small>
<b>NAP District:</b>	<u>Nunavut</u>
<b>*Lead RA Trigger Types:</b>	<u>Inclusion List (Part X, Item 69)</u> <small>(e.g., proposal, funding, land disposition, law list approvals)</small>
<b>Type of Application:</b>	<u>Water Licence</u> <small>(e.g., water licence, land use permit, quarry permit, lease, reserve, OIC)</small>
<b>Type of Approval being sought:</b>	<u>Renewal</u> <small>(e.g., new, renewal, amendment, cancellation)</small>
<b>Present licence/permit/lease number:</b>	<u>N4I-3-1S32</u>
<b>Other RAs or Screening Divisions:</b>	<u>None</u> <small>If yes, is there an Integrated Screening underway?</small>
<b>*Other RA Trigger Types:</b>	<u>None</u>
<b>Other RA Types of Approval:</b>	<u>None</u>
<b>Project File Location:</b>	<u>NAP office where project file is located</u>

**3. Project Location**

<b>*Region:</b>	<u>Nunavut</u> <small>Province/Territory</small>
<b>Topographic Map Sheet Number:</b>	<u>1:50,000 map sheet number</u>
<b>*Geographic Place Name:</b>	<u>Cambridge Bay</u> <small>(e.g., nearest place name or geographic feature)</small>
<b>Latitude / Longitude:</b>	<u>69 07'N, 105 03'W</u> <small>(e.g., degrees, minutes, seconds)</small>
<b>*Drainage Region:</b>	<u>Peace Athabasca Arctic Coast Islands Lower Mackenzie Keewatin</u> <small>circle one</small>
<b>Watershed:</b>	<u>Water Supply Lake</u> <small>(nearest creek, river or lake system)</small>
<b>Street Name:</b>	<u>N/A</u> <small>(complete address of project if it occurs in a municipality)</small>
<b>*Nearest Community:</b>	<u>Cambridge Bay</u>
<b>Surrounding Land Status:</b>	<u>Crown Land?</u> <small>(e.g., private, Commissioner's, crown land, settlement land)</small>
<b>Special Designation:</b>	<u>No</u> <small>(Yes / No - e.g. heritage river system)</small>

**4. Project Description**

\*Physical Work Being Assessed: Municipal Infrastructure: water use and waste disposal  
(e.g. road, bridges, etc.)

\*Multiple Activities?: ☒ Yes ☐ No

\*Physical Activity as identified from Inclusion List: Water Use  
(e.g., water use, etc.)

\*Project Category Code: **Point** Linear Areal circle one

\*Phase of Project / Primary Undertaking: Operation/ maintenance of water use and waste disposal facilities  
(e.g., construction, modification, operation, abandonment, decommissioning, repair, maintenance, installation, or expansion)

Project Description: Describe thoroughly (e.g. duration of project, size of project, related physical activities, machinery used, fuels and chemical use and storage, etc.)

Water supply - water is pumped from the Water Supply Lake, filtered and chlorinated

Sewage - buildings that are not connected to the uniliner have holding tanks that are pumped out, sewage wastes are disposed of at the sewage lagoon; the pump out area for sewage trucks has eroded the lagoon banks in the past

Solid Waste - collected by truck and deposited adjacent to the sewage lagoon, wastes are burned when the wind is blowing from the Hamlet, the site lacks an Operation and Maintenance Manual and does not have specific provisions for hazardous wastes

Future Modifications - the Hamlet is planning to relocate the sewage lagoon and waste disposal site; however, detailed plans are not available at this time, these facilities will be evaluated through a separate screening process

What sources of information did you use?

- ☒ other government data
- ☐ historical maps
- ☐ scientific reports
- ☐ personal information
- ☐ CEAA public registry system
- ☐ contour maps
- ☒ other, Water Licence Application and supporting documentation

**5. Description of Environment****\*Ecozone:** #14 - Northern Arctic

See Appendix B for zone names

**Description of Biophysical Environment:**

- located on the Southern extreme of Victoria Island, approximately 960 kilometres northeast of Yellowknife
- located in the permafrost zone with a shallow active layer, winters are long and cold whereas summers are short and cool
- local wildlife includes: whales, seals, arctic char, arctic fox, wolves, polar bears, muskox and caribou

**Description of socio-economic and cultural environment:**

- predominantly Inuit population, some non-Inuit
- hamlet level of government, local infrastructure includes an airport, RCMP office, community health center, school, and government offices
- major activities include marine mammal harvesting, hunting, fishing, trapping, arts and crafts

**Past and Current Land Use Activities in the Area**

- ☒ Historical Maps (expired permits and licences)
- ☒ Running Maps (current permits and licences)
- ☐ Interference Maps (other land dispositions)
- ☐ Public Registry System
- ☐ GIS
- ☐ Indian Land Registry
- ☐ Land Transition Management Style



**6. Consultation/Referral of Application**Was public consultation deemed appropriate? ☐ Yes ☒ NoDate application referred to government departments: June 12, 2002Date application referred to public: N/ADeadline date for public comments: N/A**Referral sent to:****Date comments received:****Federal Government****Contact Person**

DIAND	Water	<input checked="" type="checkbox"/> Michelle Johnson
	Lands	<input type="checkbox"/>
	Minerals	<input type="checkbox"/>
	Ec. Dev.	<input type="checkbox"/>
	Env't	<input type="checkbox"/>
	I&I	<input type="checkbox"/>
	D.M.	<input type="checkbox"/>
	R.M.O.	<input type="checkbox"/>
DFO		<input checked="" type="checkbox"/> Jordan DeGroot
DOE		<input checked="" type="checkbox"/> Paula Pacholek
Health Canada		<input checked="" type="checkbox"/> Diane McCliment Peace
DOT		<input type="checkbox"/>
Coast Guard		<input type="checkbox"/>

<input checked="" type="checkbox"/> July 8, 2002
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>
<input checked="" type="checkbox"/> July 5, 2002
<input checked="" type="checkbox"/> June 17, 2002
<input checked="" type="checkbox"/> June 18, 2002
<input type="checkbox"/>
<input type="checkbox"/>

**Nunavut Government**

CG&T	<input checked="" type="checkbox"/> Director
Health	<input type="checkbox"/>
DSD	<input checked="" type="checkbox"/> Director, Env. Protection
Tourism	<input type="checkbox"/>
CLEY	<input checked="" type="checkbox"/> Leah Olak
Other:	<input type="checkbox"/>

<input type="checkbox"/> None received
<input type="checkbox"/>
<input type="checkbox"/> None received
<input type="checkbox"/>
<input checked="" type="checkbox"/> June 18, 2002
<input type="checkbox"/>

**Institutions of Public Government**

NIRB	<input type="checkbox"/>
NWB	<input type="checkbox"/>
NWMB	<input type="checkbox"/>
NPC	<input type="checkbox"/>
NSRT	<input type="checkbox"/>

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

**Inuit Organizations**

NTI	<input checked="" type="checkbox"/> Manager of Lands
QIA/KIA/KIA	<input checked="" type="checkbox"/> Manager of Lands
QWB	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>

<input type="checkbox"/> None received
<input type="checkbox"/> None received
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

**Public/Interested Parties**

HTO (Gjoa Haven, Kugluktuk)	<input checked="" type="checkbox"/>
Humlet	<input checked="" type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>
	<input type="checkbox"/>

<input type="checkbox"/> None received
<input type="checkbox"/> None received
<input type="checkbox"/>
<input type="checkbox"/>
<input type="checkbox"/>

record of consultations attached to screening form

**7. Identification of Project Components and Environmental Effects (Cont.)**

Describe biophysical and socio-economic and cultural environmental effects identified from checklist.

Environmental Effect	Describe
surface water (fresh and saltwater)	inadequately treated sewage may have impacts on water quality by contributing suspended solids and nutrients
fisheries	sewage effluent may effect fish habitat, specifically through sedimentation
community health	the impact on fish could possible affect community health if they are subsequently consumed by the community

### 8. Identification of Other Resource Uses and Their Environmental Effects

Identify relevant past, current and future (pending applications) physical works and activities and their potential adverse environmental effects.

#### Other Resource Uses

(✓ check all the items appropriate to this project)

- ☐ agriculture
- ☐ forestry
  - ☐ commercial
  - ☐ domestic
- ☒ fishing
- ☒ hunting/subsistence
- ☒ urbanization
  - ☒ commercial / residential
  - ☒ Built structures
  - ☒ Infrastructure
- ☐ mining
  - ☐ exploration
  - ☐ open pits
  - ☐ underground
- ☐ quarries
- ☒ transportation/communications
  - ☒ roads/traile
  - ☐ channels/canal
  - ☐ telephone lines, satellite dishes, cables
  - ☐ beacons
- ☐ solid waste disposal
- ☐ energy project
  - ☐ hydro
  - ☐ pipeline
  - ☐ transmission line
- ☐ other water licences, permits, leases
- ☐ land claims
  - ☐ selected
  - ☐ withdrawn
  - ☐ special management
  - ☐ heritage sites
  - ☐ cultural sites
- ☐ other private lands held under tenure
- ☐ recreational
- ☒ trapping
- ☐ mineral processing
- ☐ airport
- ☐ recreation
- ☐ other heritage site
- ☐ other, explain: \_\_\_\_\_

#### Effects from other Resource Uses

(✓ check all the items appropriate to the scope of this project)

##### Biophysical Environment

1. ☒ deposit into surface water
2. ☐ deposit into ground water
3. ☐ change in surface water flow
4. ☐ change in ground water flow
5. ☐ change in water temperature
6. ☐ change in drainage pattern
7. ☒ change in air quality
8. ☐ change in air flow
9. ☐ micro-climate change
10. ☐ ice fog
11. ☐ change in ambient noise level
12. ☐ change in slope stability
13. ☒ change in soil structure
14. ☒ alteration of permafrost regime
15. ☐ destabilization/erosion
16. ☒ soil compaction
17. ☐ loss of access to non-renewable resources
18. ☐ depletion of non-renewable resource
19. ☐ removal of rare/endangered plant species
20. ☐ introduction of species
21. ☐ toxin/heavy metal accumulation
22. ☐ removal of rare/endangered wildlife species
23. ☐ change in wildlife health
24. ☒ impact to large mammals
25. ☒ impact to small mammals
26. ☒ impact to fish
27. ☐ impact to birds
28. ☐ impact to other wildlife
29. ☐ impact in a calving, nesting or spawning area
30. ☐ removal of wildlife buffer zone
31. ☐ change in wildlife habitat/ecosystem
32. ☐ other, explain: \_\_\_\_\_

##### Directly-related Socio-economic and Cultural Environment

33. ☐ impact to trappers
34. ☐ impact to hunting
35. ☐ impact to outfitters
36. ☐ recreational or back country use
37. ☐ impact to fishing
38. ☐ impact to First Nation traditional use
39. ☐ impact to community
40. ☐ impact to industry
41. ☐ impact to community health
42. ☐ change in manpower or community economics
43. ☐ change in housing or infrastructure
44. ☐ change in regional transportation
45. ☐ other, explain: \_\_\_\_\_
46. ☐ impact to traditional use area
47. ☒ impact to historical site or cultural landmark
48. ☐ impact to local aesthetics
49. ☐ impact to archaeological or historical site
50. ☐ other, explain: \_\_\_\_\_

## 9. Cumulative Environmental Effects

Based on a comparison of effects identified in #7 and #8.

Matching Number(s)	Description of cumulative environmental effects
--------------------	---

No cumulative effects were identified

**10. Mitigation Measures**

For each environmental effect identified in #7 and #8, describe the required mitigation measure(s)

Number(s)	Description of Mitigation Measure(s)
<u>1</u>	<u>-install and maintain fencing to prevent the deposit of solid waste in the sewage lagoon; locate all waste, sewage contaminants, and fuel caches a minimum of 30 meters from the normal high water mark of any water body, and be sufficiently bermed or otherwise contained to ensure that deleterious substances do not enter any water body</u>
<u>1,26,32</u>	<u>-prepare and submit an Operation and Maintenance Plan that includes a procedure for the removal of solids from the sewage lagoon, maintenance of a one metre freeboard, and maintenance of the truck discharge chute such that erosion is prevented; implement and maintain sediment and erosion control measures prior to, and during work to prevent sediment entry into the water during a spring thaw; upon completion of work, all disturbed areas should be stabilized and re-vegetated as required, and restored to a pre-disturbed state</u>
<u>1,24-26,32,41</u>	<u>-assess contaminants in solid waste site (the Hamlet has been working with CG&amp;T to secure funding for the installation and sampling of monitoring wells on the south side of the site), submit a report which summarizes the results and suggests remedial measures that incorporate progressive reclamation; develop and implement an engineered site improvement plan to effectively separate the two waste streams, prevent mixing of sewage and solid waste site effluents, and ensure the safe handling and disposal of waste oil and other hazardous wastes; sample lagoon effluent annually (as a minimum), during periods of flow, as per the <i>Guidelines for the Discharge of Treated Municipal Wastewater in the Northwest Territories</i> (1992), the effluent must meet the following criteria: Total Suspended Solids - 120 mg/L, BOD - 100 mg/L, Oil and Grease - no visible sheen, pH - 6-9, Ammonia - monitor only; control all activities, including maintenance procedures and refueling, to prevent the entry of petroleum products or other deleterious substances into the water</u>
<u>47</u>	<u>-ensure that future activities avoid the known archaeological sites listed in the attachment from the Department of Culture, Language, Elders and Youth</u>

**11. Significance**

After taking into account the above mitigation measures, are any of the adverse environmental effects significant?

☐ Yes ☒ No

If yes, identify which one(s) and proceed to #12; if no, proceed to #13.

Number(s)

\_\_\_\_\_  
\_\_\_\_\_

**12. Likelihood of Occurrence**

Of the identified adverse significant environmental effects in #11 which are likely to occur?

☐ Yes ☐ No

Number(s)

\_\_\_\_\_  
\_\_\_\_\_

**13. CEEA Determination Recommendation**

☒ Section 20 (1)(a) - Project may proceed as it is not likely to cause significant adverse environmental effects. Refer to attached cover letter for recommendations.

☐ Section 20 (1)(b) - Project may not proceed as it is likely to cause significant adverse environmental effects that cannot be justified.

☐ Section 20 (1)(c)(i) - Project must be referred to the Minister of Environment as it is uncertain whether the project is likely to cause significant adverse environmental effects



☐ Section 20 (1)(c)(ii) - Project must be referred to the Minister of Environment as it is likely to cause significant adverse environmental effects.

☐ Section 20 (1)(c)(iii) - Project must be referred to the Minister of Environment as public concerns warrant the reference.

**14. Screening Report and/or Decision Report**

Public Notice of availability of Screening Report	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Public Notice of availability of Decision Report	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
	<input type="checkbox"/> No Decision Report	
Decision Report sent out	Yes	No
	To whom (attach list)	
Public Comments Received on Screening Report	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Public Comments Received on Decision Report	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Record of Comments attached to screening form	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

**15. Authorization**

Prepared By: <u></u>	Date: <u>July 8/02</u>
Approved By: <u></u>	Date: <u>July 8/02</u>

Decision Maker (e.g., Regional Manager, engineer, etc.)

## **Appendix A: Subject Descriptors**

Choose from this list and insert as a "Subject Descriptor"

- agriculture
- buildings
- communications
- defence
- energy
- forestry
- industry
- inland waters
- mining
- oceans
- oil and gas
- parks
- transportation



## Appendix B: Ecozone

Choose from this list and insert as "Ecozone" (Note that this list only includes Ecozone found within Nunavut).

- |    |                   |   |
|----|-------------------|---|
| 08 | Taiga Shield      | South-eastern mainland near the Hamlet of Arviat, as well the Belcher Islands and Sanikiluaq.   |
| 10 | Hudson Plains     | The islands within James Bay, such as Bear Island.  |
| 13 | Southern Arctic   | Nunavut mainland, including Rankin Inlet, Baker Lake, Kugluktuk and the Jericho/Lupin Mines area. Also includes Southampton Island and the community of Coral Harbour. Does not include the Melville Peninsula area.  |
| 14 | Northern Arctic   | The Melville Peninsula (Igloolik and Hall Beach) as well as all of the arctic islands, including Baffin, Ellesmere and Victoria (with the exception of Southampton Island). Note that it does not include the Cordillera regions on the eastern coasts of Baffin and Ellesmere Islands. |
| 15 | Arctic Cordillera | The area within the mountainous Cordillera, which include the east coasts of Baffin Island, Devon Island and Ellesmere Island.  |

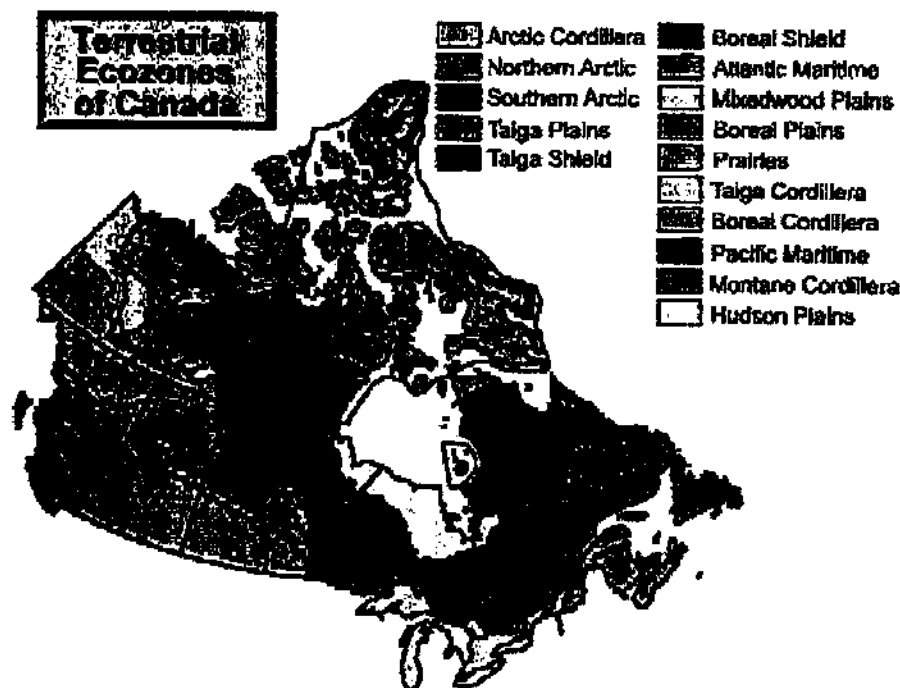


Image taken from Environment Canada at: <http://www2.ec.gc.ca/soer-ree/English/vignettes/Terrestrial/terr.cfm>



Indian and Northern  
Affairs Canada  
www.inac.gc.ca

Affaires indiennes  
et du Nord Canada  
www.ainc.gc.ca

Water Resources Division  
Qimugjuk Building  
P.O. Box 2200  
Iqaluit, Nunavut  
X0A 0H0

Your file - Votre référence

NWB3CAM

Our file - Notre référence

July 8, 2002

Ms. Phyllis Beaulieu  
Acting Licensing Administrator  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, Nunavut  
X0E 1J0

Dear Ms. Beaulieu:

Re: Cambridge Bay - Water Licence Application

The previous water licence for the Hamlet of Cambridge Bay was issued on August 1, 1995 and expired on July 31, 2000. An application for renewal was submitted to the Nunavut Water Board (NWB) on February 20, 2001. The application was reviewed, and it was determined that additional information was required. The NWB acknowledged the receipt of additional information on May 6, 2001 and subsequently requested comments on June 5, 2001. Although this application is technically not a renewal because the previous licence had expired prior to receipt of the application, comments have been provided with the terms and conditions of the previous licence in mind.

Conditions Applying to Water Use:

- the past licence conditions are adequate and, given the records submitted by the Hamlet, the previous limit of 70,000 m<sup>3</sup>/day will be sufficient

Conditions Applying to Waste Disposal: Solid Waste Disposal Site

- the licence should require that the solid waste disposal site be fenced and that the fencing be maintained to prevent the deposit of solid waste in the sewage lagoon
- plans to relocate the solid waste disposal site should be submitted to the Nunavut Water Board (NWB) upon completion, it is expected that these plans will be reviewed when required as an amendment to this licence
- the licence should include conditions that require proper handling and segregation of waste oil and other hazardous wastes

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- develop and implement an engineered site improvement plan which will effectively separate the two waste streams, prevent mixing of sewage and solid waste site effluents
- assess contaminants in solid waste site (the Hamlet has been working with CG&T to secure funding for the installation and sampling of monitoring wells on the south side of the site), remedial measures, progressive reclamation

#### Conditions Applying to Waste Disposal: Sewage Lagoon

- past inspections by the Department of Indian Affairs and Northern Development have noted erosion of lagoon berms in the area of the truck discharge chutes, the licence should require that discharge stations and culverts be maintained so as to prevent erosion
- the operations and maintenance plan should include a procedure for removing bagged toilet wastes and other solid wastes from the lagoon
- a minimum of annual sampling of the lagoon during periods of flow, as per the *Guidelines for the Discharge of Treated Municipal Wastewater in the Northwest Territories* (1992)

Total Suspended Solids	12.0 mg/L
BOD	100 mg/L
Oil and Grease	no visible sheen
pH	6-9
Fecal Coliform	10,000 CFU/100 mL
Ammonia	monitor only

#### General Comments

- the application forecasted a population growth 2.25% in five years, this would amount to approximately 34 persons which seems rather low

I hope these comments will be of assistance during the licensing process, should you have any questions or comments, please do not hesitate to contact me at (867) 975-4548 or by e-mail at [johnsonmi@inac.gc.ca](mailto:johnsonmi@inac.gc.ca).

Sincerely,



Michelle Johnson  
Kitikmeot/Kivalliq Regional Coordinator

c.c.: Mr. C. Bodykevich, Water Resources Officer

**From:** "Wilson, Anne [Yel]" <Anne.Wilson@EC.GC.CA>  
**To:** 'Michelle Johnson' <johnsonmi@inac.gc.ca>  
**Date:** 7/8/02 3:10PM  
**Subject:** RE: Cambridge Bay Water Licence

Hi Michelle,

If you are including previous recommendations that would be good as those concerns are still outstanding. The main solid waste site monitoring issue is whether organic contaminants (PCBs) previously detected in ocean sediments downstream of the landfill are still occurring. The expired licence had the requirement for the community to determine levels around and downstream of the dump, and mobility, to report an assessment of this, and propose remediation. None of this was done, and should be a condition of the renewed licence (similar to old).

For the sewage effluent, the parameters you have listed cover all but the fecal coliformes, which are usually included in the limits. Ammonia is not often included, but it is an important parameter for environmental effects so I would like to see it included in monitoring (not necessarily regulated).

I'm helping conduct phone interviews all day (til 4 our time) but if you need further info let me know and I'll get back to you around 2:30 our time.  
Thanks,

Anne

-----Original Message-----

**From:** Michelle Johnson [mailto:johnsonmi@inac.gc.ca]  
**Sent:** Monday, July 08, 2002 8:22 AM  
**To:** Anne.Wilson@EC.GC.CA  
**Subject:** Re: Cambridge Bay Water Licence

Hi Anne,

I am going to incorporate our suggested mitigative measures in the screening report and reiterate them in the cover letter. I am trying to get this out today, could you send me some specific recommendations that mirror the format of licence conditions? I have reviewed the comments in your previous submission (March 18, 2001) and will ensure these are included.

Could you provide clarification regarding contaminant monitoring from the solid waste disposal site? Which parameters should be monitored and how often...which standards should be used for compliance? Similarly, which parameters should be monitored in sewage effluent? Typically, we would suggest BOD, TSS, pH, ammonia, oil and grease...pursuant to the 1992 Guidelines for the Discharge of Treated Municipal Wastewater in the NWT....

I am in the office all day today (mostly working on the Cambridge Bay submission). Please contact me if you have any questions, thank you for your assistance.

-Michelle

Fisheries  
and OceansPêches  
et OcéansFish Habitat Management  
P.O. Box 358  
Igloolik, Nunavut  
X0A 0H0

July 5th, 2002

Dionne Filiatrault  
Nunavut Water Board  
P.O. Box 119  
Glen Haven, Nunavut  
X0B 1J0

**RE: NW11 File # NWR3CAM, Application for Renewal, Municipality of Cambridge Bay, Nunavut.**

Dear Ms. Filiatrault:

This letter is to advise that the Department of Fisheries and Oceans, Fish Habitat Management (DFO-FHM) received the submissions for the above project. I have reviewed the project and have at the present time DFO-FHM does not have any significant concerns.

Operations in or near water may result in the harmful alteration, disruption or destruction of fish habitat, which is prohibited under Section 35 of the *Fisheries Act*. The following mitigation measures, along with mitigation measures indicated in the project proposal, are intended to prevent any potentially harmful impacts to fish and fish habitat:

- All disturbed areas should be stabilized and re-vegetated as required, upon completion of work, and restored to a pre-disturbed state.
- No material should be left on the ice when there is potential for that material to enter the water (i.e. spring break-up).
- Refer to the *Freshwater Intake End-of-Pipe Fish Screen Guideline* (DFO 1995), available on request.

Depositing deleterious substances into fish bearing waters is prohibited as stated under Subsection 36(3) of the *Fisheries Act*. The following are additional measures to mitigate habitat disturbance or loss as well as the deposition of deleterious substances.

- Sediment and erosion control measures should be implemented prior to, and maintained during the work to prevent sediment entry into the water during a spring thaw.
- All wastes, sewage containments, and fuel caches should be located a minimum of thirty (30) metres from the normal high water mark of any water body, and be sufficiently bermed or otherwise contained to ensure that deleterious substances do not enter any water body.

Canada

- \* All activities, including maintenance procedures and refuelling, should be controlled to prevent the entry of petroleum products or other deleterious substances into the water.
- \* All spills of oil, fuel, or other deleterious material should be reported immediately to the 24-Hour Spill Line at (867) 920-8130.

If you have any questions, please contact me at (867) 979-8007 or by fax at (867) 979-8039.

Jordan DeGroot  
Habitat Management Biologist  
Fish Habitat Management  
Department of Fisheries and Oceans- Eastern Arctic Area

c.c. Michelle Johnson -- DIAND  
Stephanie Briscoe -- NIRB

**From:** "Phillips, Robert" <RPhillips@GOV.NU.CA>  
**To:** "Michelle Johnson" <johnsonmi@inac.gc.ca>  
**Date:** 6/25/02 10:43AM  
**Subject:** RE: CAMBRIDGE BAY - SCREENING

Hello Michelle. This office monitors the operation of the community water treatment system, sewage lagoon, and solid waste disposal site in accordance with the Public Health Act of Nunavut. No public health issues have been recently identified, however, it is recommended that a fence be installed around the perimeter of the solid waste disposal site. The community drinking water supply is chlorinated. The chlorine residual is checked daily and logged. Two water samples are submitted each month for bacteriological analysis, and a chemical water analysis conducted annually. All tested parameters meet the Guidelines for Canadian Drinking Water Quality with the exception of pH and iron. These were slightly above the aesthetic objectives. Your comments about odour and colour in the drinking water is a minor issue and is most likely due to lake turnover and spring run-off. However, with the diligent chlorination of the supply, public health is not compromised. If you require further information, do not hesitate to contact me at (867) 983-4086.

-----Original Message-----

**From:** Michelle Johnson [mailto:johnsonmi@inac.gc.ca]  
**Sent:** Tuesday, June 25, 2002 7:28 AM  
**To:** RPhillips@GOV.NU.CA  
**Subject:** RE: CAMBRIDGE BAY - SCREENING

\*\* Reply Requested by 6/27/2002 (Thursday) \*\*

Hi Robert,

I work in the water resources division of the Department of Indian Affairs and Northern Development and am coordinating the environmental screening of Cambridge Bay's water licence application. Health Canada has been consulted but they do not have any knowledge of the community or the public health issues. I was hoping that someone from the GN could help me out by providing some comments related to the impacts on public health from the sewage lagoon, solid waste disposal site, and water treatment facility. I noticed in the application that spring/summer water quality is poor/fair, would you be able to elaborate on this? My guess is that the water takes on color and odour during lake turnover but no health issues were identified.

Your comments would be greatly appreciated, thank you.

-Michelle

Michelle Johnson, M.Sc.  
Kitikmeot and Kivalliq Regional Coordinator  
Department of Indian Affairs and Northern Development  
P.O. Box 2200  
Iqaluit, NU X0A 0H0  
ph: 867-975-4548 fx: 867-975-4560

Confirmation of FAX/Document envoyé par télécopieur



Health  
Canada

Healthy Environments  
and Consumer Safety  
Branch

Santé  
Canada

Direction générale,  
Santé environnementale et  
sécurité des consommateurs

Votre file Votre référence

Our file Notre référence

June 18, 2002

Environmental Health Assessment Services  
Safe Environments Programme  
Healthy Environments & Consumer Safety Branch  
Health Canada  
4th floor, Tupper Bldg.  
AL 6604M  
2720 Riverside Drive  
Ottawa, ON  
K1A 0M2

**RECEIVED**

JUN 27 2002

D.I.A.N.O.  
Iqaluit, NU

Michelle Johnson  
Regional Coordinator, Water Management  
INAC - Nunavut Regional Office  
P.O. Box 2200, Iqaluit, NU, X0A 0H0  
(867) 975-4548 ph.  
(867) 975-4560 fx.

**Subject :** Municipality of Cambridge Bay Water Licence Renewal

Dear Ms. Johnson,

Thank you for your letter of June 11, 2002, providing Health Canada with notification, in accordance with the *Canadian Environmental Assessment Act (CEAA) Federal Coordination Regulations*, that an environmental assessment (EA) of the aforementioned project will be conducted.

We have reviewed the information submitted and have determined that Health Canada would not require an EA under CEAA and is therefore not a Responsible Authority in accordance with the Act.

The Department, however, has scientific health information and knowledge in a number of areas which could possibly, but not necessarily, be of assistance in the environmental assessment being conducted. Examples of the areas of expertise available include:

- drinking water and sewage management;
- community health (First Nations);
- air, water, food and soil quality guidelines/standards;

**Canada**



- toxicology (multimedia - air, water, soil, food);
- environmental and occupational toxicology;
- epidemiology; and
- health risk assessment and risk management.

This list should not be considered an exhaustive one, but rather a sample of Health Canada's areas of expertise. These issues are of particular interest to this Department as Health Canada is primarily responsible for the Health of First Nation peoples and federal employees and more generally, for the health of all Canadians. In addition, Health Canada has special interests in projects which have the potential to impact on the use of lands and resources for traditional purposes by aboriginal persons, and on public and occupational health and safety in general.

Should any potential health concerns be identified with respect to the aforementioned project, and Health Canada is requested by a Responsible Authority under the CEAA, we would be pleased to provide relevant information and knowledge at our disposal, pursuant to subsection 12(3) of the CEAA.

Should you have any further questions, please feel free to contact Maria Ooi at (613) 952-8712, or in her absence, myself at (613) 952-9477.

Yours sincerely,



Diane McClymont Peace  
Senior Environmental Health Assessment Officer,



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Department of  
Culture, Language, Elders & Youth

Pithohilikioni

Ministère du gouvernement  
Culture Langues, Aînés et Jeunesse

JUN 18 2002

D.I.A.N.D.  
Iqaluit, NU

June 13, 2002

Michelle Johnson  
Kitikmeot/Kivalliq Regional Coordinator  
Indian and Northern Affairs  
Water Resources Division  
Box 2200  
Iqaluit, NU X0A 0H0

Re: Land Use Application NIRB Cambridge Bay Water License Application (Municipality of Cambridge Bay)

Due Date: July 1, 2002

Dear Ms. Johnson:

At your request, the Department of Culture and Heritage, Government of Nunavut, has reviewed the above-noted application. Our recommendations follow.

We recommend approval of the above-cited application, on the condition that the proponent's activities avoid the known archaeological sites listed in Attachment #1. The information contained in Attachment #1 is provided solely for the purpose of the proponent's land use activities as described in the land use application, and must otherwise be treated confidentially by the proponent.

The attached conditions specify plans and methods of site protection and restoration to be followed by the permittee if an archaeological site is encountered or disturbed in the course of the land use activity.

Sincerely,

Leah Otak, Director  
Culture and Heritage  
Department of Culture, Language, Elders and Youth

## Attachment 1

**Borden Number** NgNd-1  
**Latitude** 69 07 27 N  
**Longitude** 105 00 58 W  
**UTM** 13WDG E9935 N6798  
**Map Number** 77D/2  
**Site Type Class** undetermined  
**Site Type** campsite  
**Site Features** tent ring  
 hearth  
  
**Culture**  
**Site Condition** disturbed by hydro poles and  
 recent road building

**Borden Number** NgNd-2  
**Latitude** 69 07 23 N  
**Longitude** 105 07 18 W  
**UTM** 13WDG E9516 N6787  
**Map Number** 77D/2E  
**Site Type Class** indigenous historic ?  
 contemporary ?  
  
**Site Type**  
**Site Features** cairn  
**Culture**  
**Site Condition**

**Borden Number** NgNd-3  
**Latitude** 69 06 55 N  
**Longitude** 105 05 37 W  
**UTM** 13WDG E9627 N6699  
**Map Number** 77D/2E  
**Site Type Class** indigenous historic ?  
 contemporary ?  
**Site Type** campsite (hunting)  
**Site Features** blind (hunting)  
**Culture**  
**Site Condition**

**Borden Number** NgNd-4  
**Latitude** 69 07 14 N  
**Longitude** 105 01 46 W  
**UTM** 13WDG E9882 N6760  
**Map Number** 77D/2E  
**Site Type Class** historic  
**Site Type** trading post  
**Site Features**  
**Culture**  
**Site Condition** bulldozed

**Borden Number** NgNd-5  
**Latitude** 69 07 35 N  
**Longitude** 105 00 16 W  
**UTM** 13WDG E9982 N6824  
**Map Number** 77D/2E  
**Site Type Class** indigenous historic  
**Site Type** historic  
**Site Features** trading post

## Site Features

**Culture**  
**Site Condition**

**Borden Number** NgNd-6  
**Latitude** 69 07 07 N  
**Longitude** 105 01 13 W  
**UTM** 13WDG E9919 N6736  
**Map Number** 77D/2E  
**Site Type Class** historic  
**Site Type** wreck (ship)  
**Site Features** ship  
**Culture**  
**Site Condition** ice damage...

**Borden Number** NgNd-7  
**Latitude** 69 07 58 N  
**Longitude** 105 08 31 W  
**UTM** 13WDG E9435 N6894  
**Map Number** 77D/2E  
**Site Type Class** prehistoric  
**Site Type**  
**Site Features** cache  
**Culture** Thule ?  
**Site Condition** threatened by landfill activities

**Borden Number** NgNd-8  
**Latitude** 69 07 01 N  
**Longitude** 105 05 11 W  
**UTM** 13WDG E9656 N6720  
**Map Number** 77D/2E  
**Site Type Class** indigenous historic  
**Site Type** station (hunting) ?  
**Site Features** blind ?  
**Culture** Inuit  
**Site Condition** undisturbed

**Borden Number** NgNd-9  
**Latitude** 69 06 57 N  
**Longitude** 105 06 17 W  
**UTM** 13WDG E9583 N6706  
**Map Number** 77D/2E  
**Site Type Class** prehistoric  
**Site Type** station (hunting)  
**Site Features** cache  
**Culture** blind ?  
**Site Condition** Thule  
 close to existing landfills