



P.O. Box 119

GJOA HAVEN, NT X0E 1J0

TEL: (867) 360-6338

FAX: (867) 360-6369

ᓄᓇᓂᓪ ᐃᓚᓕᓴᓂᓪ ᑲᑎᓚᓂᓪ

NUNAVUT WATER BOARD

NUNAVUT IMALIRIYIN KATIMAYINGI

**Water Licence Application
Supplementary Questionnaire
for Municipalities**

I. GENERAL

1. Date: Sept 29, 2001
2. Applicant: Resolute Bay Airport
Municipality and Region
3. Contacts: Rick Paulton David Roberts
Name of Contact Airport Manager
Airport Supervisor 867-252-3923
Position Fax 252-3684
867-252-3925 252-3649
Telephone # Fax #
4. Community Status: ☐ Village ☐ Town ☐ City
☐ Hamlet ☒ Settlement Corporation
5. Indicate the status of the municipality's licence on the date of the application.
☐ New Application
☒ Renewal - Water Licence # N4L3 1561

II. ATTACHMENTS

1. Attach current or up-to-date detailed map(s) showing the locations of the:
- raw water intake;
 - water storage and treatment facilities;
 - fuel and chemical storage;
 - sewage treatment facilities (lagoon, honey bag pit, wetland);
 - wastewater treatment area and discharge outlets;
 - solid waste disposal areas and drainage patterns;
 - hazardous waste disposal area;
 - transportation access routes;
 - existing water bodies/courses and any changes to these water bodies/courses that have or may occur as a result of water use or waste disposal facilities, locations of environmental monitoring sites. (Outline drainage basin);
 - Traditional use areas outlined on site map and areas around the community used for recreation, camping, fishing, etc.
 - abandoned and/or restored water treatment, sewage, and solid waste disposal facilities.

Are maps attached? ☒ Yes ☐ No

If no, please indicate when they will be available.

Indicate which organization has provided the various maps or diagrams.

III. WATER SUPPLY

Water Source

1. Type of source: ☒ Lake ☐ River ☐ Well ☐ Other _____
2. Name of water source and alternative, if any.
3.

strip lake
Primary Source

Secondary Source
3. Usual break-up & freeze-up period: July 7 sept 15
Break-up Freeze-up

Water Intake

1. Please provide short descriptions for the following:
 - a. Freshwater intake facility
see attached description & photographs
 - b. Operating capacity of pumps used
unknown
 - c. Intake screen size
2"

Water Storage

1. Type of water storage facility. (check where applicable)
☐ Reservoir/Pond ☐ Storage tank ☐ None ☐
☐ Other Delivery truck Description: _____
2. If "reservoir" checked:
Is the reservoir lined? ☐ Yes ☒ No
What type of liner? _____ When was it installed? _____

Water Treatment

1. Indicate the quality of the water.

Summer:	<input checked="" type="checkbox"/> good	<input type="checkbox"/> fair	<input type="checkbox"/> poor
Fall:	<input checked="" type="checkbox"/> good	<input type="checkbox"/> fair	<input type="checkbox"/> poor
Winter:	<input checked="" type="checkbox"/> good	<input type="checkbox"/> fair	<input type="checkbox"/> poor
Spring:	<input checked="" type="checkbox"/> good	<input type="checkbox"/> fair	<input type="checkbox"/> poor

2. Describe.

chlorination in use as a precaution

3. Type of water treatment.

☐ Filtration and chlorination
☒ Chlorination only
☐ None
☐ Other _____

Description

Water Use And Distribution

1. Volume of water use:

Distribution	Estimated number of people on the system	Estimated average water consumption (Litres/capita/day)	Total water consumption (Litres/day)
	A	B	A x B
PIPED	<i>0</i>		
TRUCKED	<i>15</i>	<i>100 L/day</i>	<i>1,500 L./day</i>
TOTAL			

General Condition of the water supply facilities

1. General condition of the:

- a. Water supply facility
☒ Satisfactory ☐ Unsatisfactory

If unsatisfactory, explain.

- b. Storage facility
☒ Satisfactory ☐ Unsatisfactory

If unsatisfactory, explain.

- c. Distribution system
☒ Satisfactory ☐ Unsatisfactory

If unsatisfactory, explain.

Modifications

1. Are there any changes *planned* for the water supply system?
☒ No ☐ Yes

If yes, please attach a copy of the plan, or describe changes. Provide information on the implementation schedule.

2. Does the community believe changes needed to the water supply, storage or treatment facilities? Describe.

No.

Identification

Are there signs identifying drinking water sources presently used by the municipality?

☒ Yes ☐ No

& this is a restricted area (Airport Property)

IV. SEWAGE DISPOSAL

1. What type(s) of sewage treatment does the community have?

- ☒ Lagoon
- ☐ Mechanical system
- ☐ Wetland
- ☐ Honey bag
- ☐ Combination/Other: describe

Lagoon (if applicable)

1. Has there been any operating problems with the lagoon?

☐ Yes ☐ No

If yes, describe

*1. Some evidence of erosion. 2. Some decant structure problems
3. Freeboard issue
* Internal assessment by our engineers is planned.*

Mechanical System (if applicable)

1. Describe (type, specifications, operation and maintenance program for the mechanical wastewater treatment system).

None

2. Are sludges produced?

☐ Yes ☒ No

If yes, describe how the sludges are disposed of:

Wetland (if applicable)

1. Describe the Wetland wastewater treatment system.

Honey Bag Pit

1. Does the municipality use a honey bag pit?

☐ Yes ☒ No

If yes, describe the location, drainage, and operation/maintenance of the site:

Commercial, Industrial and/or Hazardous Wastes

1. Are there any sources of commercial or industrial *liquid* waste being discharged or deposited to the wastewater treatment system that may affect the quality of the effluent or leachate produced? *(The municipality should be aware that any commercial or industrial discharge has to be approved by the municipality)*

☐ Yes ☒ No

If yes, indicate sources, types and quantities.

Sewage Discharge

1. Are fish, shell fish and other wildlife harvested in or near the discharge area ?

☐ Yes ☒ No

If yes, indicate species harvested, and level of harvest.

General Condition of the sewage treatment facilities

1. General condition of the:

- a. Sewage collection system

☐ Satisfactory ☐ Unsatisfactory

If unsatisfactory, explain.

Subject to engineering investigation

- b. Discharge control system
☐ Satisfactory ☐ Unsatisfactory
If unsatisfactory, explain.

not a problem

- c. Dams, diversion dykes, berms
☐ Satisfactory ☐ Unsatisfactory
If unsatisfactory, explain.

Requires repair every year due to minor erosion

Modifications

1. Are there any changes *planned* in the sewage treatment facilities?

☒ No ☐ Yes

If yes, please attach a copy of the plan, or describe changes. Provide information on the implementation schedule.

subject to engineering report.

2. Does the municipality or residents believe changes are needed to the sewage treatment facilities? Describe.

no complaints.

Abandonment and Restoration

1. List and describe abandoned or restored sewage treatment facilities. Refer to original attachment maps.

none

Identification

Are there signs identifying past and present sewage disposal sites ?

☐ Yes ☐ No

V. SOLID WASTE DISPOSAL

1. Briefly describe how solid wastes are collected and delivered to the disposal area.

Household garbage is disposed of in the Municipal Land Fill.

2. Is the solid waste site fenced? ☐ Yes ☒ No

3. Is the fence adequate? ☐ Yes ☐ No

If no, describe

Waste Reduction

1. Does the municipality burn garbage? *N. A.*
☐ Yes ☒ No

If yes, describe how and when this is done.

2. Has the municipality considered measures for waste reduction such as recycling or reuse? *N. A.*
☐ Yes ☐ No

If yes, describe

Animal Carcasses Pit

1. Does the municipality have an area for the disposal of animal carcasses? *N. A.*
☐ Yes ☐ No

If yes, describe the location, drainage and operation/maintenance of the site

Waste Oil Pit

1. Describe the waste oil storage area.

waste oil is burned in a special Furnace

Bulky Scrap Metal Waste Disposal Area

1. Does the municipality have a scrap metal or bulky waste disposal area?

☐ Yes ☒ No

If yes, briefly describe its location and operation plan.

Temporarily stored for later disposal

Commercial, Industrial and/or Hazardous Wastes Disposal Area

1. Are there any commercial or industrial waste being discharged or deposited in the solid waste disposal area? *(The municipality should be aware that any discharge of commercial or industrial waste has to be approved by the municipality)*

☐ Yes ☒ No

If yes, please indicate sources, types and quantity.

2. Will the municipality use a hazardous waste disposal area?

☐ Yes ☒ No

If yes, describe its:

a. Location

b. Structure

c. Operation and maintenance (describe special handling/disposal methods for these wastes)

General Condition of the Solid Waste Disposal Area

N.A.

1. Comment on the general conditions of the:

a. Solid waste disposal area

☐ Satisfactory ☐ Unsatisfactory

If unsatisfactory, explain.

Modifications

1. Are there any changes planned for the solid waste disposal area? *N.A*
☐ No ☐ Yes

If yes, attach a copy of the plan, or describe changes. Provide information on the implementation schedule.

A copy of the Municipal Water use Inspection Report has been sent to the Community Development Engineer at B.N. in Egauit for their comment & remedial action.

2. Are changes needed to the solid waste disposal area? Describe.

Abandonment and Restoration

1. List and describe abandoned or restored solid waste facilities. *N.A.*
Indicate their location on a map.

Abandoned solid waste facility adjacent to the Sewer Lagoon.

Identification

Are there signs identifying past and present solid waste disposal sites?

☐ Yes ☐ No

VI. INSPECTION AND MONITORING

1. When were municipal facilities inspected by:

☐ Indian and Northern Affairs Inspector

Date: *July 23, 2001*

☐ Municipal and Community Affairs

Date:

☐ Other: *CB&T Airport Inspection*

Date: *Nov./01* *Planned*

2. Is there a system in place for reporting spills?

☒ Yes ☐ No

If yes, describe.

3. Is there a contingency plan for clean up of spills?

☒ Yes ☐ No

If yes, describe.

4. Have any spills occurred in the past five years?

☒ Yes ☐ No

If yes, describe and show on a map the locations of the spills. What action has been taken to clean the affected areas?

Fuel spills cleaned up & disposed - File available

Monitoring Program

1. Is water sampling and analysis done ?

☒ Yes ☐ No

If Yes, answer the questions a to e

a. Briefly describe how samples are taken and sent to the laboratory.

Done by INAC

b. Briefly describe any monitoring done for wastewater effluent and leachate.

c. Who is responsible for water sampling ?

Ba FFi Regional Health Board

Name: _____

Position: _____

Telephone #: _____

Fax #: _____

Level of training: _____

d. Recognized laboratory performing analysis of samples.

Name: _____

Address: _____

Telephone #: _____

Fax #: _____

- e. Are any changes planned in the water quality monitoring program?

☐ Yes ☐ No

If yes, describe.

VII. PUBLIC CONCERNS

1. What concerns does the municipality or residents have regarding the municipal water supply or waste disposal facilities? List the concerns and describe what steps have been taken to address those concerns.

No outstanding concerns

VIII. PUBLIC HEALTH (Help may be obtained from the Regional Environmental Health Officer if you have difficulty with this section.)

1. Date: Oct 10/01
2. Municipality: Airport At Resolute Bay
3. Contact: (Environmental Health Officer Contact) Shaun Mackie / Bonnie Segal
Telephone #: 867-979-7654
Fax #: 867-979-7659
979-7656
4. Have there been any problems or health/environmental concerns with drinking water ?
☐ Yes ☒ No

If yes, describe

5. Have there been any problems or health/environmental concerns with sewage disposal/treatment?
☐ Yes ☒ No

If yes, describe

6. Have there been any problems or health/environmental concerns with solid waste disposal?
☐ Yes ☒ No

If yes, describe

Monitoring Program

1. Does the Regional Health Board perform water quality sampling?
☐ No ☒ If Yes, answer questions (a) to (e)

- a. Briefly describe the sampling methodology.

1/month sample taken by the Public Health nurse
or by the Dep't of Public Works

- b. Briefly describe any monitoring of wastewater effluent and leachate.

Dep't of Public Works Niel MacDonald

- c. Who is responsible for sampling?

Name: Keith Adams

Position: Settlement Maintainer

Telephone #: 867-252-3455

Fax #: 867-252-3622

Level of training:

- d. Recognized laboratory performing analysis of samples.

Name: Environmental Health

Address: ~~Yellowknife~~ Iqaluit

Telephone #:

Fax #:

- e. Are any changes planned in the water quality monitoring program?

☐ Yes ☒ No

If yes, describe.

IX. TECHNICAL INFORMATION (Assistance may be obtained from the Regional Community Government (CG&T) office if you have difficulty with this section).

1. Date:

2. Municipality: *Aripat at Resolute Bay.*

3. Contact:
(Community Government and Transportation Representative)

Telephone #

Fax #

4. Population (according to most recent census results): *15 people*

5. Estimated growth rate over next 5 years: *no growth anticipated*

6. Has any baseline data collection and evaluation been undertaken with respect to the physical, biological, and chemical characteristics of the main water bodies in the area?

☐ Yes ☒ No

If yes, provide a summary of program details or site title, authors, cities, and dates:

Prepared by

Title

Completion Date

Copies attached.

If no, are such studies being planned?

☒ No ☐ Yes (If yes, when and by whom):

7. Have Elders been consulted in the collection of baseline data on main water bodies in the area?

☒ No ☐ Yes

If yes, specify.

8. Has any baseline data collection and evaluation been undertaken with respect to the various biophysical components of the environment potentially affected by the project?

☐ No ☐ Yes

If yes, provide details below.

Copies attached

Prepared by

Title

Completion Date

If no, are such studies being planned?

☒ No ☐ Yes.

If yes, specify:

Attachments

1. Attach detailed plan or drawing(s) of the present *solid waste disposal area*. Include the following information:
 - a. details of pond size and elevation;
 - b. details of all retaining structures (dimensions, materials of construction, etc.);
 - c. details of the drainage basin, and existing and proposed drainage modifications;
 - d. details of all decant, siphon mechanisms etc., including sewage treatment facilities;
 - e. details regarding direction and path of wastewater flow from the area;
 - f. distance from watercourses and fish bearing waters;
 - g. location and construction of liners;
 - h. leachate and groundwater collection systems; and
 - i. control structures.
2. Attach detailed plan or drawing(s) of the present *sewage treatment system*. The drawing(s) should include the following:
 - a. details of all retaining structures (dimensions, materials of construction, etc.);
 - b. details of the drainage basin, and existing and proposed drainage modifications;
 - c. details regarding direction and path of wastewater flow from the area;
 - d. indications of the distance from watercourses and fish bearing waters;
 - e. all sources of seepage presently encountered near these areas, including volumes (m³/day) and directions.
 - f. The volume of seepage flow (m³ / day); and
 - g. The direction of each flow.

3. Are drawings for the solid waste disposal area and sewage treatment system attached?
☒ Yes ☐ No

If Yes, who has provided them ?

If no, indicate when they will be available.

Hydrology

1. Effects on surface water flow:
Are any stream channels altered? ☐ Yes ☒ No
Is the natural storage or water level of any lake or pond changed? ☐ Yes ☒ No
Are there changes in water flow downstream of the project? ☐ Yes ☒ No
No

Is a storage reservoir created in a natural channel? ☐ Yes ☒ No
No

If yes to any of the above, briefly describe the expected change in flow or storage:

2. Drainage Area:
What is the drainage area? 1.0 km²
What is the average elevation of the drainage basin? 65 metres
Is the drainage basin outlined on an attached map? ☒ Yes ☐ No

Describe the drainage basin characteristics, (vegetation, general soil type, lakes, swamps and permafrost areas, etc.)

3. Channel characteristics:
Is the course of any channel changed? ☐ Yes ☒ No

If yes, describe measures to maintain stream bed and bank stability.

4. Will the cross-section of any watercourse be changed? ___ Yes ___ No
If yes, describe the change and its effect on the flow capacity of the channel.

Water Supply

1. What is the rate of withdrawal from the source? 40 m³/day.
2. Is water drawn from the source ← intermittently ___ continuously
3. If it is drawn intermittently, during what month(s) is it drawn? 12 months
4. For what period is it drawn (days/weeks/months)? daily
5. What is the rate of flow of source (if river) or size (if lake)? _____
6. At the intended rate of water usage, describe the effects on the river or lake from which water will be drawn.

Water Intake

1. Please provide short descriptions of the following:
 - a. freshwater intake facility

small pump house

- b. operating capacity of the pumps

- c. intake screen size

2"

Water Storage

1. Is a dam or dyke being used to store or alter the flow of water? ___ Yes ☒ No
2. What are the dimensions of the dam or dyke?
Length: _____ Width: _____ Height: _____
U/S slope: _____ D/S slope: _____
3. Does the proposed dam create a reservoir in a natural watercourse?
___ Yes ☒ No
If yes, what is the storage capacity and surface area of the reservoir?
_____ m³ _____ ha.
4. Will the dam or dyke affect fish migration or movement ?
___ Yes ☒ No
If yes, describe all measures for compensation of fish habitat lost due to the dam or dyke, and mitigation for fish migration or movement.

Water Treatment

1. Indicate the capacity of the treatment facility. _____ L/min
2. What is the capacity of the water storage facility. _____ m³
3. Describe the method of water treatment (i.e., backwash, flocculation, sedimentation, chemicals used), and provide the results of the most recent bacteriological and chemical analysis. Attach a diagram, if possible.
4. Are there any changes planned in the water treatment facilities?
☒ No ___ Yes
If yes, attach a copy of the plan or indicate changes and include an implementation schedule.
Include excerpt from MACA Capital Plan if available.

Sewage Disposal

1. Indicate the level of sewage treatment:
____ primary ____ secondary ____ tertiary
Pre-treatment (if applicable): ____ screening ____ maceration
Lagoons (if applicable): ____ anaerobic ____ aerobic ____ facultative
2. Indicate the capacity of the sewage treatment facility _____ m³
3. Based on current population projections, the facility will meet the needs of the community until the year _____ .
4. Average depth of the wastewater lagoon 1.2 m.
5. What is the design freeboard? .7 m.
6. Indicate the retention time of the sewage while in the treatment facility _____ days.
7. Indicate the estimated rate of discharge of wastewater _____ L/sec.
8. Indicate the location of the discharge point _____.
9. Is the discharge: ☒ seasonal ____ continuous
If the discharge is seasonal, during what month(s) is it done? July
What is the duration of the discharge (days/weeks/months) ? _____
10. Are there any changes planned in the sewage disposal facilities?
☒ No ____ Yes
If yes, attach a copy of the plan or indicate changes and include an implementation schedule.

Include excerpt from MACA Capital Plan if available.

Solid Waste Disposal

1. Indicate the capacity of the disposal area _____ m³.
2. The *average* depth of the solid waste disposal site _____ m.
3. The current facility will meet community needs until the year 2020.

4. Do any natural watercourse enter the solid waste disposal area? What methods are used to decrease the amount of runoff water entering these areas?

No

5. Indicate the volume of water that may enter these areas from any source(s) and attach all pertinent details of the diversions.

Source

none

Volume

None

6. Please *describe* any diversions of watercourses:

None

7. Are there any changes planned in the solid waste disposal facilities?

☒ No ☐ Yes

If yes, attach a copy of the plan or indicate changes and include an implementation schedule.

Include excerpt from MACA Capital Plan if available.

Other

1. Describe any additional details on the existing municipal facilities which should be considered by the Nunavut Water Board during its review.