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

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DOCUMENT MANAGEMENT

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DOCUMENT AMENDMENTS

	Description	Date
(1)	Updated for public distribution as separate document from NWB Guide 4	June 2010
(2)	Updated NWB logos and reformatted table to allow rows to break across page	May 2011
(3)	Update NWB logo	April 2013
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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) Shawn Stuckey CMA, MBA Senior Administrative Officer Hamlet of Gjoa Haven, NU X0B 1J0 Phone: 867 360 7141 Fax: 867 360 6309_ e-mail: saogjoa@qiniq.com	**2. APPLICANT REPRESENTATIVE CONTACT INFORMATION** if different from Block 1 (name, address) Jivko Jivkov, P. Eng. Principal Jivko Engineering Ltd. Box 1341, Yellowknife, NT X1A 1G3 Phone: 867 920 4455 Fax: 867 873 6090 e-mail: jivko@jivko.ca Attach authorization letter.)
3. NAME OF PROJECT (including the name of the project location) ***Gjoa Haven NU, Swan Lake River Bridge Construction***	
4. LOCATION OF UNDERTAKING **Project Extents** ***Latitude: 68°38'13.27" N*** ***Longitude: 95°59'41.17" W*** **Camp Location(s)** ***N/A***	
5. MAP - Attach a topographical map, indicating the main components of the undertaking. ***Attached two Google maps: scale 100 and 2400 with coordinates*** NTS Map Sheet No.: _____ Map Name: _____ Map Scale: _____	

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: _____

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

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

x Other: Municipal Land Use Authorization
Date (expected date) of issuance: ***August 2015*** Date of expiry: ***August 2016***

Name of entity(s) holding authorizations: Hamlet of Gjoa Haven, NU

7. NUNAVUT PLANNING COMMISSION (NPC) DETERMINATION

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

☐ North Baffin
☐ South Baffin
☐ Akunniq
☐ Keewatin
☐ Sanikiluaq
x 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

If Yes, indicate date issued and attach copy ***PENDING***
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.*

The distance by road from the community to the proposed bridge site is nearly 8.0km. The first 4.0km of this road is in fair condition, and is used for access to the community fresh water intake and to gravel sources. The remaining part is 5m wide trail, covered with thin layer of gravel. The last 120m of the access to the river are yet to be constructed.

While detailed geotechnical investigation was not carried out, it was observed that the riverbed in the section targeted for construction of the bridge crossing is covered with mixture of coarse sands, cobbles and occasional boulders. Improvised soil testing at various locations indicated that the ground surface is underlain by grey silt of nearly liquid consistency. While the depth of the liquefied silt was not confirmed, it is believed that it is part of the active layer of permafrost, which melts to a depth of 4' to 5' on areas exposed to sun radiation in summer.

The only location we found competent to support loading from the bridge abutments is presently used by local residents for fording the river with vehicles ranging from ATV's to heavy construction equipment. This location, shown on the pictures below and on the enclosed Google Earth maps, is proposed for construction of the bridge crossing.

Excavator crossing the river at the proposed bridge location

Dump truck crossing the river at the proposed bridge locatoion

In summer and fall the watercourse at the proposed location is between 12 m and 15 m wide and less than 0.3 m deep. The riverbanks, marginally vegetated with polar grass, are of slopes 1:8 to 1:12 towards the river. The longitudinal grade of the river is less than 0.5%. At High Water Levels during the spring thaw the river runs 35 m to 40 m wide and 1.0 m deep. According to local residents, in spring the ice on this section of the river rots and thaws on the spot without significant movement.
The superstructure is 29m long twin-steel-girder, single-lane construction fabricated of weathering steel 350-AT, impact category 3. The design load is CAN3-S6-M78, MS250-77 consisting in 8.5m long vehicle of GVW 45,000kg (100,000lb). The design load is factored by 10% for travel off-centre, 40% for dynamic loading and

additional 60% safety factor. The maximum static load, with the MS-250 configuration, that the bridge can support is in excess of 110,000kg.

The bridge deck is 4.2 m wide, and is built of creosote treated Douglas fir grade 2 or better. It is composed of 8"x10" sleepers and 3"x10" runners. The deck is boarded with 0.70 m high galvanised steel rail.

The substructure is galvanized steel Bin-wall in-filled with cement stabilised backfill. There is a Geotextile membrane installed at the base of the Bin-wall. The Bin-wall abutments and approach fill are protected against scouring with well graded Riprap.

Approximately 120m Approach Road will be built on the north side of the bridge. The road embankment will be 0.8m high and 7.0m wide at the crown. The last section of the approach will be built progressively higher, to match the elevation of the Bridge Deck. The Approach will be surfaced with a layer of 0.1m crushed (street) gravel.

Construction of bridge approach on the far (south) side of the river is not included. However, a ramp descending from the bridge deck to the ground beyond the High Water mark will be constructed.

Approximately 400m^2 Staging Area will be built adjacent to the bridge, to be used for material storage and pre-assembly of the abutment components. Eventually this area could be used by local residents as Picnic Area. Exact location of this area will be selected after consultation with local stakeholders.

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

N/A

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)
☐ Conservation
x 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
x General Water Works
☐ Power

12. **WATER USE** - Check the appropriate box(s) to indicate the type(s) of water use(s) being applied for.

- ☐ To obtain water for camp/ municipal purposes
- ☐ To obtain water for industrial purposes
- ☐ To cross a watercourse
- ☐ To alter the flow of, or store water
- ☐ Other:
- ☐ To divert a watercourse
- ***x To modify the bed or bank of a watercourse***
- ☐ Flood control

13. **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.

Name of water source(s) (show location(s) on map):***Swan Lake River***

No water will be extracted, used, discharged or contaminated

Describe the quality of the water source(s) and the available capacity: _____

_____

_____

Provide the overall estimated quantity of water to be used: _____ m^3/day

Provide the estimated quantity(s) of water to be used from each source:

_____

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

_____

Describe the method of extraction(s): _____

Estimated quantity(s) of water returned to source(s) _____ m^3/day

Describe the quality of water(s) returned to source(s): _____

_____

_____

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

15.

No liquid waste will be generated or discharged in the river. Small amount of debris resulting from the construction will be collected and disposed of in the local landfill area.

- ☐ Sewage
- ☐ Solid Waste
- ☐ Hazardous
- ☐ Bulky Items/Scrap Metal
- ☐ Animal Waste
- ☐ Other (describe): _
- ☐ Waste oil
- ☐ Greywater
- ☐ Sludges
- ☐ Contaminated soil and/or water

_____

16. **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. ***N/A***

Type of Waste	Composition	Quantity Generated	Treatment Method	Disposal Method

17. **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: _____

Administering Agency: _____

Project Activity: _____

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

18. **PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES** - Describe direct, indirect, and cumulative impacts related to water and waste.

The bridge construction activities do not involve using of water from, or discharging water into the river. Related to construction of the south abutment excavator and loader will be crossing the river a total of 8 to 10 times. Pickup trucks moving construction crew will cross the river another 12 to 15 times. This will result in an average of two crossings per day for the total period of the bridge construction. It is estimated that local hunters and picnic goers are crossing the river during summer months not less than 20 times per day.

There is no waste water produced in association with the bridge construction. There is no plan for setting a construction camp or preparation of meals on site.
The construction crew composed mainly of local residents will use their own accommodation. The Engineering crew will be accommodated in the hotel. For lunch and most likely for the coffee breaks the crew will travel to town.

19. **WATER RIGHTS OF EXISTING AND OTHER USERS OF WATER**

No negative impact on the quality of the water in the river during construction is anticipated. After the completion of the works fording the river by equipment and vehicles, and associated water disturbance, will be discontinued.

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

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

20. INUIT WATER RIGHTS

Quality of the water will not be substantially affected during construction, and will be improved after completion of the bridge.

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).

21. 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.

The proposed bridge will be built at community request and at location supported and approved by the Community Council

22. SECURITY INFORMATION

N/A

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.

23. FINANCIAL INFORMATION

The financial responsibility for the Project stays with the Hamlet of Gjoa Haven, NU. Project Funding is by the GN.

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.

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

N/A
Bridge Design was completed by Jivko Engineering and approved by the Hamlet and the GN in 2009. All bridge material was delivered to Gjoa Haven in 2010. Due to project funding issues the construction work was delayed until this year

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

The construction works will be completed in two phases three weeks each:
- ***September 2015 – Abutment Construction***
- ***August 2016 – Superstructure installation and bridge opening for traffic***

Construction
Proposed Start Date***: September 2015*** (month/year) Proposed Completion Date: ***September 2016*** (month/year)

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

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

Post - Closure
Proposed Start Date: _____ (month/year) Proposed Completion Date: _____ (month/year)

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

Construction
☐ Winter ☐ Spring ☐ Summer ***x Fall*** ☐ All season

Operation
☐ Winter ☐ Spring ☐ Summer ☐ Fall x All season

Closure
☐ Winter ☐ Spring ☐ Summer ☐ Fall ☐ All season

Post - Closure
☐ Winter ☐ Spring ☐ Summer ☐ Fall ☐ All season

26. PROPOSED TERM OF LICENCE

Number of years (maximum of 25 years): One year

Requested Date of Issuance: ***August 2015*** Requested Expiry Date: ***August 2016***

(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)

27. **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.

After completion of this year construction season we will submit report with pictures of the completed work
Another report will be submitted after the project completion in 2016

28. **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 x No If no, date expected _____

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

☐ Yes x No If no, date expected July 2015

Completed General Water License Application form.

x Yes _____

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

X No If no, date expected _____

English Summary of Application.

x Yes

Inuktitut and/or Inuinnaqtun Summary of Application.

x Yes

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

x Yes

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.

x No If no, date expected _____

29. **SIGNATURE**

Shawn Stuckey	SAO		Jul 10/15
Name (Print)	**Title (Print)**	**Signature**	**Date**