



GWICH'IN LAND AND WATER BOARD

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Staff Report

Prepared by AlecSandra Macdonald November 26, 2015

Application Number:	G15L8-001 and G15L8-002 (G99L8-001 and G99L8-002 Renewals)	Type:	"B" Water Licences
Proponent:	GNWT Department of Transportation (DOT)		
Activity:	Construct and maintain ferry landings at the Peel River and Mackenzie River/Arctic Red River crossings (Watercourse training and the deposit of waste)		
Location:	1. Peel River Landings: 67.3408N/134.8703W, 67.3384N/134.8791W (Dempster Highway km 74.5) 2. Mackenzie/Arctic Red River Landings: 67.4571N/133.7611W, 67.4467N/133.7444W, 67.4470N/133.7397W (Dempster Highway km 143.6)		

Application Summary

The GNWT Department of Transportation has applied for 25 year renewals of Water Licences G99L8-001 (Peel River Ferry Landings) and G99L8-002 (Mackenzie River Ferry Landings). The undertakings, which involve the placement of up to 500m³ of gravel per crossing into the rivers, were first licensed in 1999, and then renewed in 2004 and 2010. There have been no changes to the licensed activities since the initial application.

Application Timeline

	Peel	Mackenzie
Community Meetings	July 14 th 2015 (Fort McPherson)	July 15 th 2015 (Tsiigehtchic)
Application Received	September 30 th 2015	September 30 th 2015
Request for Additional Info	October 8 th 2015	October 8 th 2015
Updated Applications Submitted	October 22 nd 2015	October 27 th 2015
Application Deemed Complete	October 27 th 2015	October 27 th , 2015
Application Sent for Review *see distribution table, attached	October 27 th 2015	October 27 th 2015
Review Deadline	November 18 th 2015	November 18 th 2015
Proponent Response Deadline	November 25 th , 2015	November 25 th , 2015
Board Meeting	November 30 th , 2015	November 30 th , 2015

Discussion

1. Compliance Record 2011 to 2015

a) Inspections

Three inspections were carried out for each of G99L8-001 (Peel) and G99L8-002 (Mackenzie) between 2011 and 2015:

- G99L8-001 (Peel) on August 19, 2011: Three violations were noted:
 - No detectable sediment control measures being used
 - 2010 Annual Report was submitted late and missing information
 - Long term parking of a vehicle within 100 m of the water's edge

- G99L8-001 (Peel) on October 15, 2013: No violations were noted

- G99L8-001 (Peel) on November 10, 2015: One violation noted
 - Licence was not posted or available
 - Concern that no drip trays/ spill containment not used
 - Concern that employees were uncertain of procedures contained within spill contingency plan, and unsure of methods for disposing of spill-contaminated material
 - Concern regarding timely notifications of spills

- G99L8-002 (Mackenzie) on August 19, 2011: Three violations were noted
 - No detectable sediment control measures being used
 - 2010 Annual Report was submitted late and missing information
 - Long term parking of a vehicle within 100 m of the water's edge

- G99L8-002 (Mackenzie) on October 15, 2013: No violations were noted

- G99L8-002 (Mackenzie) on November 10, 2015: One violations noted
 - Licence was not posted or available
 - Concern that parking occurring within 100m of water's edge
 - Concern that drip trays/ spill containment not used

b) Licence Requirements

- Annual reports were submitted each year (2011-2014)
- Community meetings were held annually
- LAMP studies were completed annually and reports provided
- Structural Alternatives report not updated as requested
- Sediment control measures were not always used
- Allowable gravel deposits (500m³) were exceeded in 2011 at both the Peel (520 m³) and Mackenzie (506m³). For all other years, licence requirements were met, according to annual reports
- Unauthorized waste deposit (Spill) took place in 2014
- Spill Contingency Planning/ response – Room for improvement

2. Past Studies

a) Aquatic Effects Study (2002 – 2003)

- Involved Community Consultation, Traditional Knowledge Studies, Fish and Habitat Studies (Fish sampling, water quality testing, benthos sampling) and Hydraulics analysis (flow rate, water depth, sediment character). Results were compared to control sites
 - Ferry landings appear to affect nearby currents (~100-200m up and downstream) causing new eddies to form, and filling in old ones, but overall river flows not affected
 - Study indicated operations have no significant impact on water quality or fish health in either Mackenzie or Peel Rivers
 - Overall the amount of deposition due to ferries is negligible compared to natural sources

b) Structural Alternatives Study October (2003 and 2010 update)

- Evaluated the cost and practicality of using alternatives to gravel (cost per landing in 2003: Fixed dock \$5M, Cement pads \$500k, Ballast Tanks \$6M, stationary ramp \$3M, removable ramp \$900k, Bridges \$33M, placement of gravel landings \$20k) All alternatives were rejected due "reasons associated with engineering, environment, function and cost"
- 2010 update Report investigated the use of a steel docking wedge (\$550k-\$675k Per landing)

c) Local Area Monitoring Plan (LAMP) 2011-2015

- Designed to measure the impact of ferry landing fill depositions. Involves bathymetry mapping around the ferry landings, ferry landing surveys, and local fish harvest surveys
 - Concerns that study design and small sample size make it difficult to extract meaningful data
 - Recommend a 5 year summary report to capture any trends
 - Concerns that fish harvest surveys fail to capture important qualitative data

3. Summary of 2015 Reviewer Comments

A total of 10 organizations responded to the GLWBs request for comments (distribution list and review tables attached) Below is a summary of the topics brought forward by each group.

Environment Canada:

- Ensure compliance with Fisheries Act
- Use secondary containment for fuel storage/transfers
- Update Environment Canada contact information in SCP

Fisheries and Oceans Canada:

- Use only clean gravel and employ sediment control measures
- Consider alternatives to gravel landings

GNWT ENR:

- Renew licence for a term of 5 years, not 25
- GNWT (DOT) is to wash ferry decks when moored only
- Copy of Licence to be kept with SCP, copy of SCP to be kept on Ferry
- Include inventory of available communication devices in the SCP, and have them available
- Expand on formal training programs and record keeping

Gwich'in Social and Cultural Institute:

- Renew licence for a term of 5 years, not 25
- Include in SCP methods to notify local land users of spills
- LAMP should compare fish count data to GRRB harvest data
- LAMP should include qualitative data (fish and river health)
- Continue Monitoring programs indefinitely
- Traditional Knowledge should be better incorporated into long term monitoring programs
- Consider cumulative effects (permafrost thaw slumps, erosion, upstream contamination, changes to freeze up/break up)

Gwich'in Renewable Resources Board:

- Renew licence for a term of 5 years, not 25
- Formal review of Terms and Conditions every 5 years
- Explore alternative sediment control measures
- Continue/expand monitoring programs based on 2002/03 study, including TK
- Address Cumulative effects

Gwich'in Tribal Council:

- Extend Review Period
- GNWT should enter into a compensation agreement with GTC, per the GCLCA
- The Licence renewal should be treated as a new application, and subject to all relevant processes

Gwichya Gwich'in Council:

- Renew licence for a term of 5 years, not 25
- Request for Public Hearing
- SCP should include measures for each different landing

- SCP should address lessons learned from past spills
- New studies required
- Consider alternative landing construction methods including alternatives to gravel
- Increase community Meetings to 2/year

Hamlet of Fort McPherson:

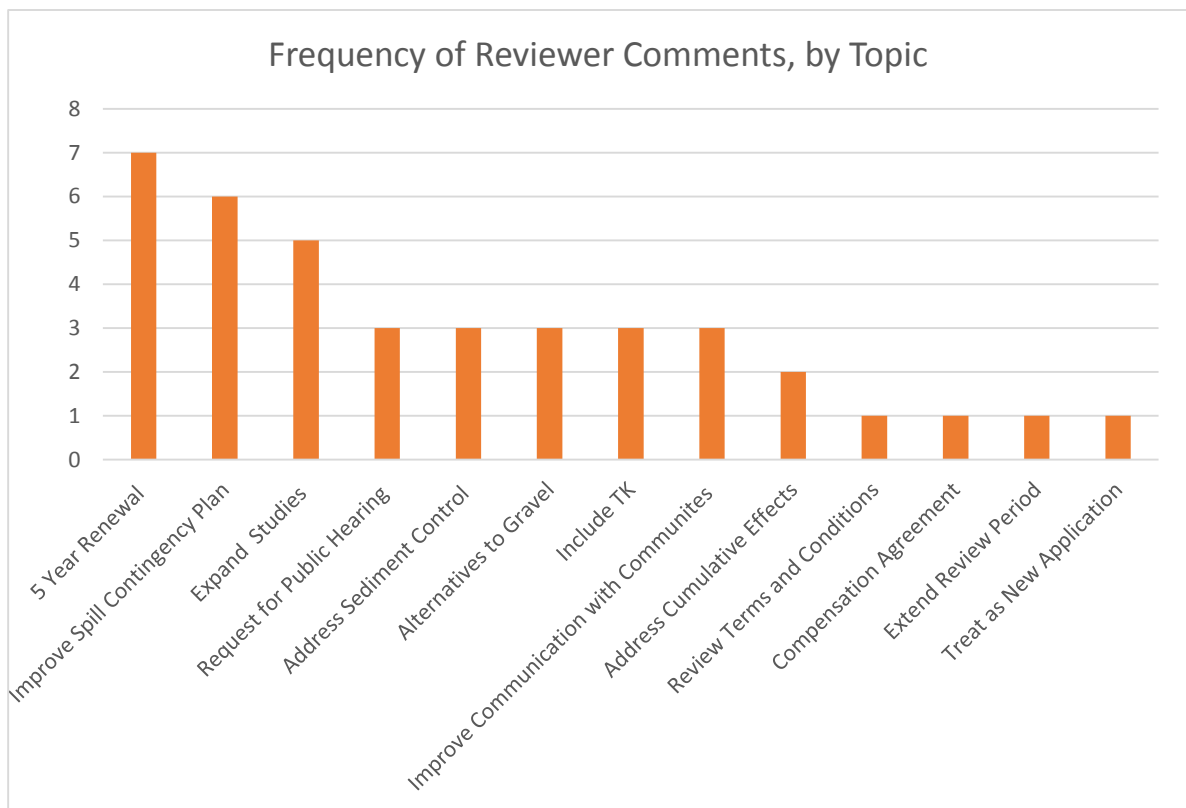
- List approved Hazardous Waste sites to avoid unauthorized disposal

Tetlit Gwich'in Council:

- Request for Public Hearing
- Renew licence for a term of 5 years, not 25
- Additional Studies required

Tetlit Gwich'in RRC

- Request for Public Hearing
- Renew licence for a term of 5 years, not 25
- Improve communication with community
- Improve SCP/worker training
- Additional Studies Required



Recommendation

Renewal of Water Licences for a 5 year period, subject to the proposed terms and conditions.