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**PERMIT TO ALTER A BODY OF WATER**

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Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, Section(s) 48

Date: **JUNE 30, 2014**

File No: **533-03, 560-03**

Permit No: **ALT7530-2014**

Proponent: **Deer Lake Power  
2 Trans Canada Highway  
Deer Lake NL A8A 2E4**

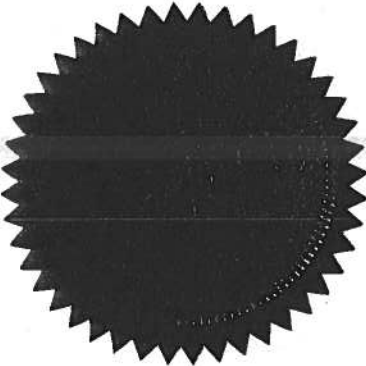
Attention: **Mr. Jaimie Park**

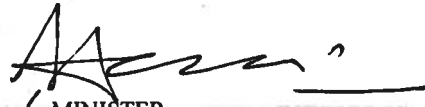
Re: **Corner Brook (Watson Brook) - Replacment of 3 culverts with a 8 metres single span bridge**

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Permission is hereby given for : **the replacement of 3 (three) washed out culverts at Watson Brook, a tributary of Corner Brook Stream, with a 8 (eight) metres short span bridge, with reference to application dated April 17, 2014 and additional information received on June 12, 2014.**

- This permit does not release the proponent from the obligation to obtain appropriate approvals from other concerned provincial, federal and municipal agencies.
- The proponent must obtain the approval of the Crown Lands Division of the Department of Environment and Conservation if the project is being carried out on Crown Land.
- This permit is subject to the terms and conditions indicated in Appendix A (attached).
- It should be noted that prior to any significant changes in the design or installation of the proposed works, or in event of changes in ownership or management of the project, an amendment to this permit must be obtained from the Department of Environment and Conservation under Section 49 of the *Water Resources Act*.
- Failure to comply with the terms and conditions will render this permit null and void, place the proponent and their agent(s) in violation of the *Water Resources Act* and make the proponent responsible for taking any remedial measures as may be prescribed by this Department.



  
MINISTER

**APPENDIX A**  
**Terms and Conditions for Environmental Permit**

Corner Brook (Watson Brook) - Replacment of 3 culverts with a 8 metres single span bridge

**Bridge Design**

1. A 8 (eight) metres single span bridge may be constructed across Watson Brook, a tributary of Corner Brook Stream, near the City of Corner Brook.

2. The bridge must have the following minimum dimensions:

Bridge span 8 m  
 Waterway opening 21 m<sup>2</sup>  
 Height above high water level 1.5 m

3. The crossing structure must provide adequate capacity to safely discharge flood flows without causing backwater effects upstream or increased flow velocity downstream.

4. To safely convey peak flows the bridge must be designed according to the following hydraulic criteria:

Design return period 100 years  
 Maximum flow capacity 40.5 m<sup>3</sup>/s

5.

Name	Design Flow (m <sup>3</sup> /s)	Span (m)	Freeboard (m)	Max. Velocity (m/s)
Watson Brook Bridge	40.5	8	1.5	-

6. The bridge(s) must have the following minimum dimensions:

Crossing Name / No.	Span (m)	Waterway Opening (m <sup>2</sup> )	Height Above Stream Bed (m)	Freeboard (m)
Watson Brook	8	21	3	1.5

7. To safely convey peak flows the bridge(s) must be designed according to the following hydraulic criteria:

Crossing Name / No.	Design Return Period (years)	Maximum Flow Capacity (m <sup>3</sup> /s)	Maximum Flow Velocity (m/s)
Watson Brook	100	40.5	-

**Bridge Construction**

8. The use of creosote treated wood is strictly prohibited within 15 metres of all bodies of fresh water in the province.

9. Drainage ditches must collect and transport surface runoff in a manner that does not cause flooding, erosion or sedimentation of adjacent land or receiving waters.
10. Bridge abutments must be set back 0.5 metres from the normal edge of a watercourse to prevent constriction during high flow conditions.
11. Infilling must not cause increased water elevation upstream or increase flow velocity downstream of the site. Reduction of the natural cross sectional area of any watercourse is not permitted.
12. The upstream and downstream sides of abutments must be protected with rip-rap, concrete or heavy timber to prevent erosion and scouring.
13. Where pumping is used to bypass flow, cofferdams must be installed both above and below areas of construction. The proponent must provide pumps with sufficient capacity to prevent washout of cofferdams.
14. Cofferdams must be properly designed and constructed of suitable materials to prevent leakage and to resist loss of any material as a result of erosion. Cofferdams must be removed upon completion of their intended function. All material must be removed carefully to prevent disturbance of the water body and to prevent water quality degradation.
15. Abutments and piers must be constructed in the dry and during times of low flow.
16. Roadside embankments near the watercourse must be adequately protected from erosion by sodding, seeding or placing of rip-rap.
17. Adequate erosion protection must be provided where roadside ditches discharge into watercourses near bridges.

#### **Flood Zone Development**

18. The proposed bridge construction is within the designated flood plain for the City of Corner Brook. This development, and future development at the site, must comply with this Department's policy directive for *Flood Plain Management W.R. 96-1*.
19. Any further development in the flood zone area not specifically covered by this permit will require a separate permit from this Division under Section 48 of the *Water Resources Act*.

#### **General Alterations**

20. Any work that must be performed below the high water mark must be carried out during a period of low water levels.
21. Any flowing or standing water must be diverted around work sites so that work is carried out in the dry.
22. Water pumped from excavations or work areas, or any runoff or effluent directed out of work sites, must have silt and turbidity removed by settling ponds, filtration, or other suitable treatment before discharging to a body of water. Effluent discharged into receiving waters must comply with the *Environmental Control Water and Sewage Regulations, 2003*.
23. All operations must be carried out in a manner that prevents damage to land, vegetation, and watercourses, and which prevents pollution of bodies of water.
24. The use of heavy equipment in streams or bodies of water is not permitted. The operation of heavy equipment must be confined to dry stable areas.
25. All vehicles and equipment must be clean and in good repair, free of mud and oil, or other harmful substances that could impair water quality.
26. During the construction of concrete components, formwork must be properly constructed to prevent any fresh concrete from entering a body of water. Dumping of concrete or washing of tools and equipment in any body of water is prohibited.
27. Wood preservatives such as penta, CCA or other such chemicals must not be applied to timber near a body of water. All treated wood or timber must be thoroughly dry before being brought to any work site and installed.
28. Any areas adversely affected by this project must be restored to a state that resembles local natural conditions. Further remedial measures to mitigate environmental impacts on water resources can and will be specified, if considered necessary in the opinion of the Department.

29. The bed, banks and floodplains of watercourses, or other vulnerable areas affected by this project, must be adequately protected from erosion by seeding, sodding or placing of rip-rap.
30. All waste materials resulting from this project must be disposed of at a site approved by the Department of Service NL.
31. Periodic maintenance such as painting, resurfacing, clearing of debris, or minor repairs, must be carried out without causing any physical disruption of any watercourse. Care must be taken to prevent spillage of pollutants into the water.
32. The owners of structures are responsible for any environmental damage resulting from dislodgement caused by wind, wave, ice action, or structural failure.
33. Sediment and erosion control measures must be installed before starting work. All control measures must be inspected regularly and any necessary repairs made if damage is discovered.
34. Fill material must be of good quality, free of fines or other substances including metals, organics, or chemicals that may be harmful to the receiving waters.
35. The attached Completion Report (Appendix B) for Permit No. 7530 must be completed and returned to this Department upon completion of the approved works.
36. This Permit is valid for two years from the date of issue. Work must be completed by that date or the application and approval procedure must be repeated.
37. The location of the work is highlighted on the Location Map for this Permit attached as Appendix C.
38. All work must be carried out within the proponent's legal property boundaries.
39. Pictures must be submitted along with the completion report, showing the project site prior to and after development.
40. The proposed use of the facility and site will not involve any storage of pollutants such as fuels, chemicals, pesticides, etc.

cc: Dr. Amir Ali Khan, P. Eng.  
Manager, Hydrologic Modelling Section  
Water Resources Management  
Environment and Conservation  
P.O. Box 8700  
4th Floor, West Block, Confederation Building  
St. John's, NL A1B 4J8

cc: File Copy for Binder

cc: Mr. Jonathan Grandy  
Manager, Crown Lands Western  
Crown Lands Division  
Dept. of Environment and Conservation  
P.O. Box 2006  
Corner Brook, NL  
A2H 6J8

cc: Fisheries Protection Division  
Ecosystem Management Branch  
Fisheries and Oceans Canada  
P.O. Box 5667  
St. John's NL A1C 5X1

cc: City of Corner Brook  
Ms. Marina Redmond  
PO Box 1080  
Corner Brook NL A2H 6E3



Government of Newfoundland and Labrador  
Department of Environment and Conservation  
Water Resources Management Division

## Appendix B - Completion Report

Pursuant to the *Water Resources Act*, SNL 2002 cW-4.01, Section(s) 48

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2 Trans Canada Highway  
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Attention: Mr. Jaimie Park

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Permission was given for : the replacement of 3 (three) washed out culverts at Watson Brook, a tributary of Corner Brook Stream, with a 8 (eight) metres short span bridge, with reference to application dated April 17, 2014 and additional information received on June 12, 2014.

*I (the proponent named above or agent authorized to represent the proponent ) do hereby certify that the project described above was completed in accordance with the plans and specifications submitted to the Department of Environment and Conservation and that the work was carried out in strict compliance with the terms and conditions of the Permit issued for this project.*

Date: \_\_\_\_\_ Signature: \_\_\_\_\_

This completion report must be completed and forwarded to the following address upon completion of the approved work.

Department of Environment and Conservation  
Water Resources Management Division  
PO Box 8700  
St. John's NL A1B 4J6

**APPENDIX C**  
**Location Map for Environmental Permit**

