Newfoundland Labrador

Government of Newfoundland and Labrador
Department of Environment and Climate Change
Water Resources Management Division

PERMIT TO ALTER A BODY OF WATER

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

Date: **OCTOBER 04, 2016**

File No: **524**
Permit No: **ALT8902-2016**

Permit Holder: **Newfoundland and Labrador Hydro**
500 Columbus Drive
P.O. Box 12400
St. John's, NL, A1B 4K7

Attention: **John Linfield**

Re: **Paradise to Soldiers Pond Area (Various Bodies of Water) - Temporary Culverts and Bridges and Other Works for TL 266**

Permission is hereby given for : **the installation of temporary culverts of various lengths and up to 1500 mm diameter CSP and other types of materials and wooden bridges with spans up to 30 metres as well as other necessary works on various bodies of water to facilitate crossings at various locations along the proposed Transmission Line 266 which will connect the existing Hardwoods Terminal Station in the Town of Paradise to the new Soldiers Pond Converter Station (the "Project"), as indicated in Appendices A and D of this Permit, in reference to the application received on September 23, 2016 and further information provided in support of the application on or before October 4, 2016.**

- This Permit does not release the Permit Holder from the obligation to obtain appropriate approvals from other concerned municipal, provincial and federal agencies.
- The Permit Holder must obtain the approval of the Crown Lands Administration Division if the project is being carried out on Crown Land.
- This Permit is subject to the terms and conditions indicated in Appendices A and B (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 Climate Change 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 Permit Holder and their agent (s) in violation of the *Water Resources Act* and make the Permit Holder responsible for taking any remedial measures as may be prescribed by this Department.

MINISTER

GOVERNMENT OF NEWFOUNDLAND AND LABRADOR
Department of Environment and Climate Change

File No: **524**
Permit No: **ALT8902-2016**

APPENDIX A

Terms and Conditions for Permit

Special Conditions

1. Subject to reporting of the actual number of culverts that are required to be installed, the Permit Holder may install an estimated number of forty (40) culverts of various lengths and up to 1500 mm diameter CSP and other types of materials on various bodies of water along the proposed Transmission Line 266 which will connect the existing Hardwoods Terminal Station in the Town of Paradise to the new Soldiers Pond Converter Station.

2. Subject to reporting of the actual number of bridges required to be installed, the Permit Holder may install an estimated number of four (4) wooden bridges with spans up to 30 metres on various bodies of water along the proposed Transmission Line 266 which will connect the existing Hardwoods Terminal Station in the Town of Paradise to the new Soldiers Pond Converter Station.

3. Subject to reporting of the actual number of other necessary works that may take place in or near bodies of water, the Permit Holder may undertake other works in or near at an estimated number of eleven (11) locations in or near various bodies of water along the proposed Transmission Line 266 which will connect the existing Hardwoods Terminal Station in the Town of Paradise to the new Soldiers Pond Converter Station.

4. The Permit Holder must remove all temporary culverts and bridges. Also, the Permit Holder must dismantle and remove all constructed works and restore all sites to their original conditions. In addition, any and all material placed in any body of water must be completely removed without causing adverse effects on water.

5. Notwithstanding terms and conditions of this Permit, the Permit Holder may request from this Department to permanently keep and maintain some of the installed culverts or bridges for future use in relation to the Project.

6. The natural course or flow of any stream must not be altered. Stream cleanout work is not permitted further than 5.0 metres upstream or downstream of any stream crossing structure. Also, a minimum 15 metre wide vegetated buffer zone must be maintained along the edge of all bodies of water in order to provide bank stability and maintain local aesthetics.

7. A water quality monitoring program is not required at this time. However, this Department reserves the right to require that the Permit Holder sample, analyse, and submit results of water quality tests, for the purpose of ensuring that the water quality is maintained within acceptable guidelines. All analyses must be undertaken by a CALA accredited laboratory. Also, this Department reserves the right to require that the Permit Holder set-up monitoring stations through a Memorandum of Agreement under the Water Resources Act.

8. This Department reserves the right to require the Permit Holder to implement a reporting protocol for all phases of the Project and to require any information in relation to this Permit and the Project in whatever form, manner and time. The contact is Manager, Water Rights and Investigations Section at (709) 729-4795 or aabdelrazek@gov.nl.ca.

9. The Permit Holder acknowledges and agrees that this Permit may require and will be amended to include further provisions pursuant to the Water Resources Act and any regulations and policies in effect thereunder from time to time, as deemed necessary in the opinion of the Minister.

10. The acknowledgment of the receipt of this Permit by the Permit Holder constitutes the acceptance of this Permit and its terms and conditions and requirements stated in Appendices A, B, C and D.

11. Any further activity within a freshwater body (including wetlands and flood risk areas) may require a separate permit under Section 48 of the Water Resources Act, 2002. Permit Holder must avoid construction activities in a wetlands wherever possible.

Culvert Design

12. Any installed culvert on any body of water during the course of the Project must provide adequate capacity to safely discharge flood flows without causing backwater effects upstream or increased flow velocity downstream.

Culvert Installation

13. 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.

14. Inlet and outlet areas of culvert installations must be adequately protected from erosion by placing rip-rap, fitted stone, or concrete headwalls.

15. Culvert installations must follow the stream channel gradient to the maximum extent possible and placed in line with the direction of the main flow to minimize disturbance to the channel. Culverts must not disrupt the flow of water or cause ponding at the upstream side of the installation.

16. In multiple culvert installations, one culvert must be set a minimum of 150 mm lower than the others to provide adequate water depth and velocity for fish passage during low flow conditions. In addition, multiple culverts must be installed within 0.6 to 0.9 metres apart for maximum stability.

17. Where pumping is used to bypass flow, cofferdams must be installed both above and below areas of construction. The Permit Holder must provide pumps with sufficient capacity to prevent washout of cofferdams.

18. 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 body of water and to prevent water quality degradation.

19. All work involving minor alteration to the stream channel to permit culvert placement must be carried out at a time of low flow, and in a manner that prevents downstream siltation and unnecessary alteration of the channel.

20. Grading and finishing of roadways or road embankments must not cause damage to culverts or allow road material to enter the watercourse.

21. Roadside embankments near the watercourse must be adequately protected from erosion by sodding, seeding or placing of rip-rap.

22. Culverts must be inspected regularly so that immediate action can be taken to clear blockages caused by ice or debris or to undertake repairs as required.

23. The inlet and outlet of culverts must be clearly marked so that operators of road grading and snow clearing equipment can avoid blocking culverts.

24. Any damage to culverts during installation or due to inadequate capacity and/or improper construction must be reported to this Department. Damaged culverts must be replaced immediately to prevent overtopping, erosion, or flooding.

25. If a culvert is installed in natural fish habitat it must be embedded a minimum of 150 mm below the natural streambed (up to a maximum of 1/3 of the culvert diameter).

Bridge Design

26. Any installed bridge on any body of water during the course of the Project must provide adequate capacity to safely discharge flood flows without causing backwater effects upstream or increased flow velocity downstream.

Bridge Construction

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

28. 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.

29. Bridge abutments must be set back 0.5 metres from the normal edge of a watercourse to prevent constriction during high flow conditions.

30. 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.

31. The upstream and downstream sides of abutments must be protected with rip-rap, concrete or heavy timber to prevent erosion and scouring.

32. Where pumping is used to bypass flow, cofferdams must be installed both above and below areas of construction. The Permit Holder must provide pumps with sufficient capacity to prevent washout of cofferdams.

33. 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 body of water and to prevent water quality degradation.

34. Abutments must be constructed in the dry and during times of low flow.

35. Roadside embankments near the watercourse must be adequately protected from erosion by sodding, seeding or placing of rip-rap.

36. Adequate erosion protection must be provided where roadside ditches discharge into watercourses near bridges.

Infilling

37. The slopes along the perimeter of infilled areas must be no steeper than two horizontal to one vertical (2H:1V).

38. The constructed works must be inspected regularly so that action can be taken to undertake repairs as required.

39. Fill material must be obtained from an approved quarry site. It must not be taken from beaches or streams, and must not be dredged from a body of water.

40. 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.

41. Infilling must not disrupt the established surface drainage pattern of the area.

42. Infilling must not cause increased water elevation upstream or increase flow velocity downstream of the site.

43. Before infilling, any vegetation and topsoil must be completely removed and under no circumstances shall it be used as fill material. Topsoil must be stored and reused in final landscaping of the infilled area.

44. Select heavy rocks must be placed along the toe of any infilling to provide slope stability and erosion protection.

45. A minimum 15 metre wide vegetated buffer zone must be maintained along the edge of the body of water in order to provide bank stability and maintain local aesthetics.

General Alterations

46. Any work that must be performed below the high water mark must be carried out during a period of low water levels.

47. Any flowing or standing water must be diverted around work sites so that work is carried out in the dry.

48. 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.*

49. 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.

50. 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.

51. All vehicles and equipment must be clean and in good repair, free of mud and oil leaks, or other harmful substances that could impair water quality.

52. During the construction of concrete components, formwork must be properly constructed to prevent any fresh concrete from entering any body of water. Dumping of concrete or washing of tools and equipment in any body of water is prohibited.

53. 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.

54. 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 this Department.

55. 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.

56. All waste materials resulting from this project must be disposed of at a site approved by the Department of Service NL.

57. 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.

58. The owners of structures are responsible for any environmental damage resulting from dislodgement caused by wind, wave, ice action, or structural failure.

59. 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.

60. 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.

61. The attached Completion Report (Appendix C) for Permit No. 8902 must be completed and returned to this Department upon completion of the Project along with a written report including all installed culverts and bridges and other associated works. Pictures of installed culverts and bridges and other associated works must be submitted along with the completion report and written report, showing the Project sites prior to and after the installation of culverts and bridges and other associated works.

62. This Permit shall expire on October 31, 2019 or earlier if modified, suspended or cancelled by the Minister. The work described in this Permit must be completed by that date or the application and approval procedure must be repeated.

63. The location of the Project is highlighted on the Location Map for this Permit attached as Appendix D.

64. The Permit Holder acknowledges and agrees that this Permit does not grant any interest in land or any exclusive right in or to use or occupy lands at the Project sites.

GOVERNMENT OF NEWFOUNDLAND AND LABRADOR
Department of Environment and Climate Change

File No: **524**
Permit No: **ALT8902-2016**

APPENDIX B

Special Terms and Conditions for Permit

1. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall keep all systems and works in good condition and repair and in accordance with all laws, by-laws, directions, rules and regulations of any governmental authority. The Permit Holder or its agent(s), subcontractor(s), or consultant(s) shall immediately notify the Minister if any problem arises which may threaten the structural stability of the systems and works, endanger public safety and/or the environment or adversely affect others and/or any body of water either in or outside the said Project areas. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall be responsible for all damages suffered by the Minister and Government resulting from any defect in the systems and works, operational deficiencies/inadequacies, or structural failure.

2. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall operate the said Project and its systems and works in a manner which does not cause any water related and/or environmental problems, including but not limited to problems of erosion, deposition, flooding, and deterioration of water quality and groundwater depletion, in or outside the said Project areas. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) shall be responsible for any and all damages associated with these problems caused as a result of changes, deficiencies, and inadequacies in the operational procedures by the Permit Holder or its agent(s), subcontractor(s), or consultant(s).

3. If the Permit Holder or its agent(s), subcontractor(s), or consultant(s) fails to perform, fulfil, or observe any of the terms and conditions, or provisions of this Permit and/or Ministerial orders and guidelines, as determined by this Department, the Minister may, after providing ten (10) day notice to the Permit Holder, amend, modify, suspend or cancel this Permit in accordance with the *Water Resources Act*.

4. The Permit Holder and its agent(s), subcontractor(s), and consultant(s) indemnify and hold the Minister and Government harmless against any and all liabilities, losses, claims, demands, damages or expenses including legal expenses of any nature whatsoever whether arising in tort, contract, statute, trust or otherwise resulting directly or indirectly from granting this Permit, systems and works in or outside the said Project areas, or any act or omission of the Permit Holder or its agent(s), subcontractor (s), or consultant(s) in or outside the said Project areas, or arising out of a breach or non-performance of any of the terms and conditions, or provisions of this Permit by the Permit Holder or its agent(s), subcontractor(s), or consultant(s).

5. This Permit is subject to all provisions of the *Water Resources Act* and any regulations in effect either at the date of this Permit or hereafter made pursuant thereto or any other relevant legislation enacted by the Province of Newfoundland and Labrador in the future.

6. This Permit shall be construed and interpreted in accordance with the laws of the Province of Newfoundland and Labrador.

cc: Dr. Abdel-Zaher Kamal Abdel-Razek, Ph. D., P.Eng.
Manager, Water Rights and Investigations Section
Water Resources Management Division
Department of Environment and Climate Change
P.O. Box 8700
4th Floor, West Block, Confederation Building
St. John's, NL A1B 4J6
aabdelrazek@gov.nl.ca

cc: Mr. Steve Barnable (E)
Eastern Regional Lands Manager
Crown Lands Administration Division
Deptartment of Municipal Affairs
P.O. Box 8700
Howley Building, Higgin's Line
St. John's, NL A1B 4J6
stevebarnable@gov.nl.ca

cc: Mr. Robert Locke
Manager of Operations and Environmental Protection, GSC - Mount Pearl, Service NL
P.O. Box 8700
St. John's, NL A1B 4J6
rlocke@gov.nl.ca

cc: Fisheries Protection Division
Ecosystem Management Branch
Fisheries and Oceans Canada
P.O. Box 5667
St. John's, NL A1C 5X1
FPP-NL@dfo-mpo.gc.ca

cc: Andrew Niblock
Manager , City of St. John's
435 Airport Heights Dr.
P.O. Box 908
St. John's, NL A1A 4X9
citymgr@stjohns.ca

cc: City of St. John's
Jason Sinyard, P.Eng.
Director of Planning & Development
P.O. Box 908
St. John's, NL A1C 5M2
planning@stjohns.ca

cc: Town of Paradise
Ms. TerryLynn Smith
28 McNamara Drive
Paradise, NL A1L 0A6
lniblock@townofparadise.ca

Government of Newfoundland and Labrador
Department of Environment and Climate Change
Water Resources Management Division

Appendix C - Completion Report

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

Date: **OCTOBER 04, 2016**

File No: **524**
Permit No: **ALT8902-2016**

Permit Holder: **Newfoundland and Labrador Hydro**
500 Columbus Drive
P.O. Box 12400
St. John's, NL, A1B 4K7

Attention: **John Linfield**

Re: **Paradise to Soldiers Pond Area (Various Bodies of Water) - Temporary Culverts and Bridges and Other Works for TL 266**

Permission was given for : **the installation of temporary culverts of various lengths and up to 1500 mm diameter CSP and other types of materials and wooden bridges with spans up to 30 metres as well as other necessary works on various bodies of water to facilitate crossings at various locations along the proposed Transmission Line 266 which will connect the existing Hardwoods Terminal Station in the Town of Paradise to the new Soldiers Pond Converter Station (the "Project"), as indicated in Appendices A and D of this Permit, in reference to the application received on September 23, 2016 and further information provided in support of the application on or before October 4, 2016.**

I (the Permit Holder named above or agent authorized to represent the Permit Holder) do hereby certify that the project described above was completed in accordance with the plans and specifications submitted to the Department of Environment and Climate Change 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 Climate Change
Water Resources Management Division
PO Box 8700
St. John's NL A1B 4J6

GOVERNMENT OF NEWFOUNDLAND AND LABRADOR
Department of Environment and Climate Change

File No: 524
Permit No: ALT8902-2016

APPENDIX D

Location Map for Permit