

PERMIT TO ALTER A BODY OF WATER

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

Date: **JUNE 06, 2019**

File No: **522-16**
Permit No: **ALT10366-2019**

Permit Holder: **City of St. John's
P.O. Box 908
St. John's NL A1C 5M2**

Attention: **Mr. Mark White, P.Eng**

Re: **St. Johns - Goulds (Doyle's Brook) - Construction of bridge in designated floodplain of
Doyle's Brook**

Permission is hereby given for : **the replacement of an existing culvert with a 6.2 metre span bridge across Doyle's Brook at Bishop's Line, Goulds, St. John's as per the location map in Appendix-D, to accommodate climate change flow and to alleviate the potential of flooding, with reference to the application dated February 5, 2019 and additional information received on June 6, 2019.**

- 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 Municipal Affairs and Environment under Section 49 of the *Water Resources Act*.



MINISTER

APPENDIX A
Terms and Conditions for Permit

Flood Zone Development

1. The proposed bridge is within the designated flood plain of Doyle's Brook in Goulds. This development, and future development at the site, must comply with this Department's policy directive for *Flood Plain Management W.R. 96-1*.
2. 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*.
3. The proposed use of the facility and site will not involve any storage of pollutants such as fuels, chemicals, pesticides, etc.
4. The structure will not interfere with the flow of water or displace water such that it creates a worse flooding situation for other properties.

Bridge Design

5. A 6.2 metre span bridge may be constructed across Doyle's Brook in Goulds, St. John's.
6. The crossing structure must provide adequate capacity to safely discharge flood flows without causing backwater effects upstream or increased flow velocity downstream.
7. Piers must be designed to prevent failure resulting from scouring of streambed material.

8.

Name	Design Flow (m ³ /s)	Span (m)	Freeboard (m)	Max. Velocity (m/s)
Bridge across Doyle's Brook at Bishop's Line, Goulds	13.3	6.20	0.45	1.8

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

Crossing Name / No.	Span (m)	Waterway Opening (m ²)	Height Above Stream Bed (m)	Freeboard (m)
Bridge across Doyle's Brook at Bishop's Line, Goulds	6.2	6.71	1.315	0.45

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

Crossing Name / No.	Design Return Period (years)	Minimum Flow Capacity (m ³ /s)	Maximum Flow Velocity (m/s)
Bridge across Doyle's Brook at Bishop's Line, Goulds	100 year climate change	13.3	1.8

Bridge Construction

11. The use of creosote treated wood is strictly prohibited within 15 metres of all bodies of fresh water in the province.
12. 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.
13. Bridge abutments must be set back 0.5 metres from the normal edge of a watercourse to prevent constriction during high flow conditions.
14. 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.
15. The upstream and downstream sides of abutments must be protected with rip-rap, concrete or heavy timber to prevent erosion and scouring.
16. 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.
17. 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.
18. Abutments and piers must be constructed in the dry and during times of low flow.
19. Roadside embankments near the watercourse must be adequately protected from erosion by sodding, seeding or placing of rip-rap.
20. Adequate erosion protection must be provided where roadside ditches discharge into watercourses near bridges.

General Alterations

21. Any work that must be performed below the high water mark must be carried out during a period of low water levels.
22. Any flowing or standing water must be diverted around work sites so that work is carried out in the dry.
23. 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*.
24. 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.

25. 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.
26. 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.
27. 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.
28. 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.
29. 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.
30. 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.
31. All waste materials resulting from this project must be disposed of at a site approved by the Department of Service NL.
32. 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.
33. The owners of structures are responsible for any environmental damage resulting from dislodgement caused by wind, wave, ice action, or structural failure.
34. 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.
35. 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.
36. The attached Completion Report (Appendix C) for Permit No. 10366 must be completed and returned to this Department upon completion of the approved works. Pictures must be submitted along with the completion report, showing the project site prior to and after development.
37. 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.
38. The location of the work is highlighted on the Location Map for this Permit attached as Appendix D.
39. All work must be carried out within the Permit Holder's legal property boundaries.

GOVERNMENT OF NEWFOUNDLAND AND LABRADOR
Department of Municipal Affairs and Environment

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Permit No: ALT10366-2019

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, as determined by this Department, the Minister may, without notice, 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.

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cc: Amir Ali Khan, Ph.D., P.Eng.
Manager, Water Rights, Investigations and Modelling Section
Water Resources Management Division
Department of Municipal Affairs and Environment
P.O. Box 8700
4th Floor, West Block, Confederation Building
St. John's, NL A1B 4J6
akhan@gov.nl.ca

cc: File Copy for Binder

cc: Frank Norman (Eastern)
Land Management Specialist
Crown Lands Administration
Howley Building
St. John's
franknorman@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: Ms. Jennifer Bursey, P. Eng.
CBCL Limited
187 Kemount Road
St. John's, NL A1B 3P9
jackc@cbcl.ca



Government of Newfoundland and Labrador
Department of Municipal Affairs and Environment
Water Resources Management Division

Appendix C - Completion Report

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

Date: JUNE 06, 2019

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Permit Holder: City of St. John's
P.O. Box 908
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Attention: Mr. Mark White, P.Eng

Re: St. Johns - Goulds (Doyle's Brook) - Construction of bridge in designated floodplain
of Doyle's Brook

Permission was given for : the replacement of an existing culvert with a 6.2 metre span bridge across Doyle's Brook at Bishop's Line, Goulds, St. John's as per the location map in Appendix-D, to accommodate climate change flow and to alleviate the potential of flooding, with reference to the application dated February 5, 2019 and additional information received on June 6, 2019.

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 Municipal Affairs and Environment 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 Municipal Affairs and Environment
Water Resources Management Division
PO Box 8700
St. John's NL A1B 4J6

APPENDIX D
Location Map for Permit

