

PERMIT TO ALTER A BODY OF WATER

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

Date: **JUNE 01, 2020**

File No: **536-04**
Permit No: **ALT11446-2020**

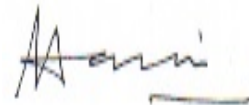
Permit Holder: **Churchill Falls (Labrador) Corporation
1 Trans Labrador Hwy
P.O. Box 310
Churchill Falls, NL A0R 1A0**

Attention: **Scott Blake**

Re: **Smallwood Reservoir and Forebay Areas - Dyke and Hydraulic Structure Repairs (Various Locations)**

Permission is hereby given for : **the repair of various dykes and hydraulic structures located on the Smallwood Reservoir and Forebay area including placement of sand and gravel on downstream slopes, placement of rip rap along upstream dyke slopes, removal of vegetation from dykes, repairs to gates, and associated activities outlined in the application received from Nalcor Energy Churchill Falls on June 1,2020.**

- 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, Climate Change and Municipalities under Section 49 of the *Water Resources Act*.



(for) MINISTER

APPENDIX A
Terms and Conditions for Permit

Dam Construction

1. 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.
2. Reservoir shorelines with moderately steep slopes or vulnerability to wave induced erosion, must be adequately protected with armour stone, rip-rap, or by other suitable measures.
3. The reservoir side of the dykes must be constructed with a facing of armour stone or rip-rap to provide adequate protection from wave or ice induced erosion.
4. The downstream side of the dykes must be maintained to address any loss of material and maintain design slopes.
5. Stoplogs installed both upstream and downstream of the gates shall be used to bypass flow to allow for gate repair work. Pumping shall be used to help dewater gates.
6. Structures in contact with new concrete shall be treated with high pressure water to clean and remove any unsound materials. Any noticeable deteriorated concrete will be removed before the placement of new concrete. All new concrete shall be well bonded to the surface of the existing concrete against which it is cast.
7. Vegetation is to be removed from around water control structures including removing timber, brush, and slash to ensure the integrity of the structures.
8. The dam and spillway must be inspected regularly to identify any indications of structural failure, leaking, erosion or other problem so that immediate action can be taken to rectify the problem.
9. The transportation of labour and materials to the site must be along existing access roads.

Dam Safety

10. Dams in the Smallwood Reservoir system have been classified in the LOW to EXTREME consequence categories based on the 2007 Canadian Dam Association (CDA) guidelines. The owner must meet requirements as per the dam classification of LOW to EXTREME as outlined in the CDA's Dam Safety guidelines (Current Edition), including (depending on the classification):
 - Carry out an annual Dam Safety Inspection and provide the results to this Department,
 - Carry out a Dam Safety Review and submit a Dam Safety Report to this Department at least every **five years**,
 - Develop an Operation, Maintenance and Surveillance (OMS) Manual,
 - Prepare an Emergency Preparedness Plan (EPP).

General Alterations

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

13. 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*.
14. 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.
15. 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.
16. 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.
17. 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.
18. 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.
19. 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.
20. 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.
21. The owners of structures are responsible for any environmental damage resulting from dislodgement caused by wind, wave, ice action, or structural failure.
22. 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.
23. 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.
24. All waste materials resulting from this project must be disposed of at a site approved by Service NL.
25. The attached Completion Report (Appendix C) for Permit No. 11446 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.
26. This Permit is valid for five years from the date of issue. Work must be completed by that date or the application and approval procedure must be repeated.
27. The location of the work is highlighted on the Location Map for this Permit attached as Appendix D.

Water Supply Area

28. The work to be carried out is within the watershed area of the drinking water supply for Churchill Falls. Care must be taken when working in the watershed, and in particular, near the intake for the drinking water system to prevent any deterioration in water quality.

29. A complete oil spill clean-up kit must be on site at all times when gasoline or fuel powered equipment is being used or refuelled. The kit must contain the following:
- One hand operated fuel pump
 - One recovery container such an empty 205 litre drum
 - One shovel
 - One pick axe
 - Five metres of containment boom
 - Five absorbent pads
 - Twenty-five litres of loose absorbent material

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.

- cc: Ms. Annette Tobin, P. Eng.
Environmental Engineer, Drinking Water and Wastewater 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
annettetobin@gov.nl.ca
- cc: Ms. Paula Dawe, P.Eng.
Manager, Drinking Water and Wastewater Section
Water Resources Management Division
Department of Environment, Climate Change and Municipalities
P.O. Box 8700
4th Floor, West Block, Confederation Building
St. John's, NL A1B 4J6
pauladawe@gov.nl.ca
- cc: Jeff Bannister (Western and Labrador)
Western and Labrador Regional Lands Manager
Crown Lands Administration Division
Department of Fisheries, Forestry and Agriculture
JeffBannister@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



Appendix C - Completion Report

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

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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, Climate Change and Municipalities 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, Climate Change and Municipalities
Water Resources Management Division
PO Box 8700
St. John's NL A1B 4J6

APPENDIX D
Location Map for Permit

